The Builder.

VOL. XIII.—No. 667.

THE "present condition and future prospects of architecture!" was the theme, and a wide one, on which Mr. Tite, M.P. addressed the Royal Institute of British Architects on the 5th inst. when, as chairman, he opened the session. Let us, preparatory to the observations which will necessarily follow Mr. Tite's remarks, place the latter in full before our readers, at least as fully as the able chairman's habit of rapid speaking will permit. Mr. Tite commenced by observing that it had been generally the practice, at the opening meeting of the session, for the chairman to make a few remarks on the principal subjects which had occurred during the recess: he himself had occasionally followed that course, but on the present occasion his thoughts had been turned in another direction, and he had, therefore, announced his intention of occupying their time for a few moments "on the present condition and future prospects of architecture." He had been much led to this subject by an incident which occurred at a recent meeting of a small society called the Architectural Association. At their first meeting, about three weeks since, he was a visitor. The association was a body of young men who met to prosecute their studies, and with one of whose suggestions he had been much pleased. It appeared that the members of that body felt the necessity of something like a diploma, or some other recognition of their attainments, and that they were willing to submit themselves to an examination, in order to obtain an opinion on their professional merits and attainments. He (the chairman) thought this was a step in the right direction. The association, when he attended its meeting, was addressed by the chairman, a man of considerable talent, Mr. Bailey, in a very able and suggestive address, embracing much that was wanted by young men about to embark in an anxious and arduous profession; but the suggestion he had referred to was one which had strongly commended itself to him,—and he could not but regard it as a remarkable fact that these young men should feel it so desirable that their attainments should be recognized, that they should offer themselves voluntarily for examination. It was an important step in the history of their art. As Mr. Bailey had said, if they were exposed to competition, that competition could only be met by showing that architects possessed superior attainments to those with whom they had to compete for public favour.

He proposed to divide what he had to say into two subjects,—the present position of architecture and its professors, and their future condition and prospects.

In considering the present position of architecture, he could not but advert to what it was when he first embarked in life. At that time the number of architects who had any claims to that title amounted in London to about fifty; and there were not more than four or five leading men: to one of those he was articled. It was then the custom to devote six years of a young man's life in that way,—and that was a concession of one year from the ordinary period of seven years' apprenticeship. He was accordingly articled for that period. At that time there was a fallacy, which perhaps even existed to some extent at this day, that it was necessary to send a young man who desired to be an architect into the carpenter's shop,—or, as it was technically called, he went for "three years to the bench." He could hardly conceive how three years could be more completely wasted. The idea of sending a lad from school into a workshop to be qualified at the end of the term only in a very imperfect way to put together a door or a sash, did appear to him to be a most extraordinary waste of time. Luckily for himself and his friends, he escaped the ordeal. He served his articles, he hoped, faithfully and honestly, for six long years. In the present day he believed the practice had erred in an opposite direction, and it was now the custom to article a youth for three years only,—in which time very little could be learnt. Formerly, the opportunities which an architect had for study and improvement were few and costly. There was abundance of information of great value, but it was scarcely attainable; and the first move that was made to obtain information was by means of an Architectural Association, where a few earnest young men associated themselves together to make a design or a sketch from a given subject, or to discuss a short paper read by one of its members. That association memorialized the Royal Academy for literary assistance, and the Royal Academy opened their library to them once a week; and there they had access to books which were otherwise inaccessible. On looking through his own library he found that there was no want of books at the time referred to, which would teach a man the elements of his profession; but they were costly, and in some instances somewhat scarce. In 1762, Stuart published the first volume of his "Athens:" the second volume was published in 1787, and the third in 1794: the first volume of the "Ionian Antiquities" appeared in 1769, and the second in 1797; "Palladio," by Leoni, in 1715; and Adams's "Spalatro," in 1754: Chambers's "Elements of Architecture" was published in 1759, and he was building Somerset House in 1774. The well-known work of Desgodetz, "Les Edifices Antiques de Rome," was published in 1682: but all these books were very costly, and at that time there was no institute or society by which the information which those books contained could be reached by ordinary students. With regard to Gothic architecture, there was the "Vetusta Monumenta:" Carter commenced his "Ancient Architecture" in 1795. Britton produced the first volume of his "Antiquities," in 1806; and the fourth volume in 1816; and he commenced his "Cathedrals" also in 1816. But there were no books or literature generally accessible, and the young architect had enormous difficulties to encounter. At present every kind of information was easily obtained, and at a very trifling cost. Among the earlier steps leading to this result was the Architectural Society, which was founded in 1831, under the patronage of the Duke of Sussex. The Institute was later in point of time, and it was unfortunate that the profession was separated by the existence of two institutions. He himself joined the Architectural Society, and after some years became its President, and when the proper time arrived, he did his best to promote the union of the Architectural Society with the Institute, which was eventually accomplished. The Institute was founded in 1834, and obtained its charter in 1837. In 1835 they received Sir John Soane's donation of 750*l.*: in 1842 the two societies were united; and in 1848 the Queen first granted the Royal Gold Medal. At the time of the foundation of the Institute, it consisted of twenty-five fellows and fifteen associates; and although he had to regret that they were not more numerous than they were at present, he still thought that, comparing their present with their original numbers, and considering the many eminent men who had joined them, they were justified in congratulating themselves on their present position.

The next question that occurred to him in looking at the present position of architecture, was to inquire what was the influence of the Institute at the present day. Upon the profession itself, he believed the influence of the Institute was considerable and important. At the Institute the student had access to a valuable library, to lectures and discussions, and he believed that there were advantages in connection with it for the promotion of their architectural position, which without it they would altogether have failed to obtain. With regard to its influence upon society, though it would be wrong to assume that the Institute had its proper position among the literary societies of London, it had obtained a certain amount of influence, and that had been apparent in two recent instances. The one was in reference to keeping the land on the south-east side of St. Paul's open for the public. The Institute moved in that matter, and appointed a committee, and the public attention which they were able to call to the subject, he ventured to hope, had secured that great object, almost national in its importance. This was mainly to be attributed to the influence of the Institute as a united body. The next question was the Building Act. The old Act, as they knew, was very imperfect, and had existed for ninety years; but no two men could agree in amending it. About ten years ago, however, the Government brought in another Act, which was very complex in its machinery, and under which it was very difficult to obtain a decision on any contested point. The late lamented statesman, Sir William Molesworth, had the courage to undertake the matter, and with great success. He only regretted that Sir William Molesworth had not been spared to receive the congratulations of the Institute for having combatted the difficulties which surrounded the question. In that matter the Institute had made its influence felt. He had the pleasure of being the chairman of the committee appointed on that subject, and although he began by opposing the Bill, he became so satisfied of the perfect sincerity of Sir W. Molesworth, and of his desire to make the Bill useful and workable, to adopt any reasonable suggestions, that in the end he became a warm supporter of the measure, and by a train of fortunate circumstances had the honour of becoming a member of the Parliamentary Committee itself, and to assist in passing the Bill. He did not mean to say that everything was done that might have been done, but by sweeping away the complicated machinery of the previous Act, a great deal of good would doubtless be effected. The only unfortunate part of the Bill were the clauses introduced at the instance of the builders in opposition to the architects, and those clauses he believed would lead to difficulties hereafter; but he did claim for the Institute, as a body, that their influence in the question had been felt, and the Institute was now in the position of being the examining body for the district surveyors. It was a great step in advance that their position should be so acknowledged. There had been some difficulty in passing this provision of the Act. It was strongly opposed (he knew not why) by the present Duke of Somerset (then Lord Seymour), and supported by Lord John Manners, for which courtesy he was bound to thank his lordship, and to congratulate the Institute that it was now the law of the land.

He would now pass to the effect of the Institute upon architecture generally, and in that respect he thought they had nothing to be ashamed of. In visiting the French Exhibition, he had endeavoured to ascertain whether they were behind-hand with their neighbours; and with every desire to exempt his mind from the influences of national prejudice, he thought that there was nothing to be seen in Paris, in the more recent productions of the French artists, to make English architects ashamed of

the comparison. In London, he thought that the architects had done well, and, to use a common phrase, had held their own. As very recent instances, he would quote the British Museum and the Palace of Westminster. In the latter, all that the most refined taste and anxious industry could effect had been accomplished. Those who chose the style had to answer for that choice; but the work had been carried out with taste and judgment, and Sir Charles Barry had entered most thoroughly into the feeling and spirit of the architecture of our Gothic ancestors. He (the chairman) had the same remarks to make as to German architecture. The great works of Klenze, of Munich—the Walhalla, the Glyptothek, and the Pinakothek,—were splendid specimens of modern art, but his attempts at Gothic were absurd. The Museum at Berlin was a great work of Schinkel; but his "Entwurf" for the church of St. Gertraud, was so wretched, that it was well for the city of Berlin that it remained only a project. In St. George's-hall, Liverpool, architectural decoration had been carried to a great extent, and that building was certainly quite upon a par with the works of any of the French architects.

With regard to modern Gothic architecture, it was difficult to compare that of France or Germany with that of England; perhaps because English Gothic, as seen in our best examples, such as Westminster, York, Salisbury, or Beverley, was peculiar in taste and detail, to the pointed architecture of France or Germany. But, upon the whole, he considered modern French Gothic very inferior indeed to that of England, in its general effect as well as in detail. He thought the church of St. Clothilde, on the whole, a failure; but he had seen a church in course of construction, in Paris, near the Faubourg Poissonnière, in which there were cast-iron columns and cast-iron ribs, filled in with plaster, in such a manner as would not now be tolerated for a moment in England.

He was of opinion, however, that Gothic architecture was too fashionable in England; and he sincerely regretted it, — partly, perhaps, because of early teaching, and perhaps because his recent visit to Italy had revived his old impressions. Classical architecture appeared to be almost forgotten by English students; and he had been exceedingly struck by the fact, that in a clever and well-written book, by an architect, on "The Gothic Architecture of the North of Italy," classical architecture was ignored and despised. This was a sign of the times which, as an architect, he was bound sincerely to regret. At one time English architects had been mad for Grecian architecture; but now the great works of Wren, Palladio, Inigo Jones, and the great architects of Italy were neglected; and one gentleman (Mr. Ruskin) admired to the very echo the Ducal Palace at Venice—a feeling which he regretted should exist among the architects of England. The writer of the book to which he referred had engraved, as a beautiful example, a window in the very angle of the main story of one of the principal palaces: to effect this the angle was cut through, and the upper part, of very heavy architecture, was supported on corbels only a few inches thick. He had himself been taught that the weight should be carried consistently and honestly; and so violent a departure from that rule as this and many other instances he could quote in Venice, he could not consider consistent with architectural truth. He thought that architects and architecture were much indebted to Mr. Ruskin, but he regretted that his lot had been cast in Venice; for of all the ugly types of Gothic architecture to be found on the continent, that of Venice was, in his opinion, the most ugly; and although he agreed with Mr. Ruskin and Mr. Street that the origin and progress of Gothic architecture might be traced in Venice more successfully than elsewhere, his own opinion was, that the Venetians never attained any eminence whatever in that style of architecture, and that all that could be claimed for it was a certain amount of pictorial picturesqueness. He did not know whether these views were acceptable to the meeting, — but he wished to recall the serious attention of the profession to the beautiful architecture of Italy, and its exceeding fitness to English religious observances;—its facility for accommodating large numbers, and enabling them to join conveniently in the services, and to hear the sermon. At the same time he did not undervalue our attainments in regard to mediæval architecture, of which, especially in regard to decoration, we had every reason to be proud; and which contrasted favourably with those of French architects.

He wished he could speak in similar terms of the public improvements in London, on which, it is true, enormous sums had been expended; but the French had done the same thing in a way which put English parsimony to shame. The tower of St. Jacques, as restored, and forming the centre of a large open space, constituted one of the finest objects in that magnificent street of Paris, and redeemed it from tameness and monotony. This fact, together with the noble space round the Hôtel de Ville, showed there was an amount of taste and liberality in Paris which it would be well to imitate in London. The difficulty the committee of the Institute had had to contend with to secure the vacant ground at St. Paul's was a matter for which the people ought to take shame to themselves, when contrasted with the sacrifices which the French had made for the improvement of their metropolis.

In regard to the present position of architects, it was to be observed that they were now rather in a transition state. Formerly, architects and engineers were not separated as at present. Mylne and Alexander, both architects, constructed Blackfriars-bridge and the London Docks; and if the engineers had gone ahead of the architects in later times, that was the fault of the architects themselves. They were quite able to help themselves. Every gentleman present might be an engineer, an architect, a builder, a decorator, or anything he pleased. The difficulty he had referred to was to be met simply by superior attainments on the part of architects; bearing in mind that in England men would always be estimated in proportion to their practical ability.

With regard to the future prospects of architecture, the great object to be hoped for was a test, by examination of the ability of its professors; and he hoped the time would come when the Government would employ architects and engineers because they were recognized by their professional brethren, and when an architect would be honoured because he had passed an examination before the Institute of British Architects; and the more so if they went to that examination voluntarily.

Mr. Tite proceeded to read the substance of the qualifications required from architects in Prussia, who were subjected to a short examination in literature and general and technical science, including the integral and differential calculus, projection of shadows, conic sections, perspective logarithms, road and railway making, the French and Italian languages, and shorthand! the examination being public and competitive.

He believed that those who, like himself, had practised as an architect for thirty years, must feel that, after a time, most of the things included in the Prussian regulations would be demanded of English architects; and he hoped that some system of examination would be carried out, for upon that alone would depend the advancement of the art. There was no other mode of getting "the right man in the right place," than to let the right man be properly informed of what he had to do. The council had authorised him to state, that some of the topics which he had introduced to the meeting should form the subject of discussion on some future evening. In the meantime he must congratulate the profession on the progress it had made (and particularly on the offer of the younger members to submit themselves to a voluntary examination); and would urge them to consider carefully the comparative merits of Mediæval and Italian Architecture.

LONDON HOUSE-BUILDING:

CORNER SHOPS.

Mr. Builder.—Premising that I have not the privilege of being a member of the honourable and useful profession of architecture, or even skilled in the ancient craft of the builder, yet I hope that I am gifted with an average share of common sense and observation, and have not for several years walked through the streets of London with my eyes shut,—I therefore venture the following observations.

Amongst the curiosities of this great metropolis,—both human beings and the work of their hands,—I have been struck by some peculiarities of our street architecture, which seems as strange as most matters which have come under my notice.

In the first place, I hate shams, and nothing is more vexing to me than to see a church or other building set apart for a sacred purpose,—itself a cheat,—masked with Gothic forms and devices, a mere shell, behind which the natural roof, much lower than the shell itself, is distinctly visible from certain points to every passenger in the street. It seems to me wonderful that when these fronts are reared, it is not thought worth while to continue the mask to such a distance from the front, that at any rate those of small observation may be pleased with the idea of completeness.

Many of our taverns and other buildings are masked and stuccoed,—I dislike the latter almost as much as the former,—*it is in fact a mask*, which if applied with the greatest skill and taste, I can never help fancying the rough brickwork through it, and being uncomfortably impressed with the idea of premature decay, rottenness, and shiftyness, if I may be allowed to use such a word. I remember that monstrous effigy of George the Fourth at King's-cross,—a work of art which you have already noticed in your paper,—and although I never saw that *work* without a shudder, and a sort of feeling of shame and disgrace that money should actually have been expended upon such a thing in a place which we consider the metropolis of the world, and that too in the nineteenth century, I have often since regretted that it was not removed to some out-of-the-way place, where it might still be safely kept as a sort of *beacon and warning*. I would have had one half carefully skinned, showing the pantile nose, and other portions of the king, &c. in order that the finished or stuccoed part might be studied in contrast with the inward.

Paint and whitewash improperly applied I know you abominate: so do I. In the Chapel at Lambeth Palace, the carved stalls and other woodwork of richly coloured oak, is painted in imitation of maple-wood: at least, it was so a few years since. Let me hope that the paint is now scraped off. I could mention many instances of this kind of misapplication, which has caused a similar amount of painful feeling to that caused by viewing the fine Greek marble statues of a nobleman now dead, gilt from head to foot and burnished. Such work is a waste and disfigurement. I would like, in the street architecture of London, to see substantial materials skilfully and tastefully employed; brick to be known as brick, stone for stone, and stucco used, if at all, as stucco.

In our shop architecture the application of paint is often misapplied. Some years since, when Grey-street, Newcastle-upon-Tyne (in some respects as fine a street as we have in this country), was newly built, I have often heard the late Peter Nicholson say,—"It is a fine street, certainly; but when the shops are open,

LONDON HOUSE-BUILDING: CORNER SHOPS.

I always have an uncomfortable feeling that those great buildings have only a glass foundation: the piers are totally insufficient for the support of such superstructures."

This was truthful criticism, for no building, nor even articles of furniture, can be entirely agreeable to the eye, if associated with feelings of instability.

The wish for room for display renders it difficult to remedy this fault in street architecture; yet, as we know and feel that iron is the only material which in the same space can give strength and safety, it seems to me a pity to disguise the metals in imitation of woods and marbles, which if so placed could not possibly bear the weight above. What would be the effect if the pillars and girders of the Crystal Palace were painted like marble? There is more in fancy and association than may at first be supposed. I would like, however, in the street architecture of London, to see the wholly glazed shops more frequently broken by more solid buildings, which might be applied to various purposes of trade. We follow too much the same design, making rows of things the one too much like its neighbour.

There is, however, one phase of shop architecture which seems to me so inconsistent with the principles of sound construction, and is so offensive, not only to my own eyes, but also to those of many others, that it has been the principal reason for this communication,—I mean the corner shops, which are still on the same plan in the course of erection, in spite of the numerous failures which must be evident to every one who walks our streets. The sketch which I send will show better than words can describe my meaning.

In the best cases, when the house stands without cracks and rents for a few years, what can be more unsatisfactory than the appearance of such buildings as these. It is contrary to what I, as a reader on the subject, consider to be the true principles of architecture, and looks both awkward and dangerous. In many parts of London, where the houses have been built in the old and substantial brick manner, the corners on this plan have in most instances moved from the perpendicular. I have seen two corner houses of more modern and less careful work fall down, and others pulled down, to prevent a catastrophe, and rebuilt. Others, in many parts, are so cracked, warped, and propped, that few persons would like to venture past the place, much less into the shop. Now, sir, this arrangement, practised in so many instances, and with such general ill effects, is such a curiosity of London architecture, that I make no apology for submitting it to you, feeling at the same time how difficult a thing it is for even architects to get the people out of a beaten track. I have not forgotten your own observations on this same subject in previous volumes.

ONE WHO DOES NOT TRAVEL FROM DAN TO BEERSHEBA AND FIND ALL BARREN.

ON ARTISTIC METAL WORK*

IN venturing remarks and observations on artistic metal work, I propose dwelling more particularly on that portion of it which is connected with a style of architecture having its development in the Christian era, and owing much of its beauty to the aspirations, the self-denial, and the love inculcated in this faith, which has given to cathedrals the elevated roof, the pointed outline piercing the sky in its spires, which has exhibited its saints and martyrs in the dignity of sculpture, and in its frescoes and storied windows portrayed its works of mercy and of love.

It may be as well first to take that portion of it which more particularly belongs to the precious metals, and enrichments of enamel, niello, &c.; and I must express how much I owe to the writings of Mr. Wyatt and others for much historical information on these subjects. Many of the remains of the first centuries at Rome and elsewhere give evidence of the adaptation of the conventionalities of the age to the symbolism of the Christian faith. Thus, in the catacombs, the forms common to the Romans have received the impress of Christian ideas, and the Good Shepherd is represented in Roman costume, carrying his sheep. The conversion of Constantine the Great opened a vast field to the development of greater richness in the decoration of Christian churches. The fact of the removal of the seat of empire by him to Constantinople in the fourth century, joined to the vastness and beauty of his presents to the church, gave an impetus of the strongest kind to works in metal and other adornments of an ecclesiastical character.

The chalices of that period, which were large, with two handles, were frequently used, not only for the purposes of administration, but were hung in numbers near the altar. The same emperor gave to the churches he founded at Rome forty chalices of solid gold, each weighing 1 lb. and fifty of 2 lbs. each, and twenty of 20 lbs. each. At another period we find Charlemagne presenting one of solid gold, weighing the enormous quantity of 52 lbs. Again, still later, appear accounts of a circle of ten great chalices, with forty others arranged between the columns of the altar, weighing altogether 267 lbs. Time, and the subsequent refusal of the cup to the laity, have left few of these relics of the customs of the early church and the piety and liberality of these emperors. Patens of early periods were correspondingly costly,—sometimes of solid gold, at others composed of metals of various qualities enriched with gems and precious stones: they present in the descriptions ideas of costliness utterly exceeding the expenditure on these vessels in the present day. One is described, given by Constantine, of solid gold, weighing 15 lbs.; and another, given by Charlemagne, of gold and corresponding adornment, weighing 30 lbs. If at the present time it were required to produce a chalice and paten like those given by Charlemagne, the intrinsic value would be for the gold alone, without gems or workmanship, 4,200*l*. Again, the cost of the circle of chalices referred to would, in intrinsic value of metal, be no less a sum than 13,600*l*. With such an expenditure in metal unwrought, is it to be wondered at that the remains of ancient metal-work should leave immensely behind the corresponding productions of the nineteenth century, and that the goldsmiths of the present day required to emulate works of antiquity in artistic skill, and the decorative processes of enamelling and niello, &c. should find, from the small amount generally assigned for such purpose, in the result either a paucity of execution, or that the labour and care necessary to render the work perfect become on his part frequently a voluntary offering to his perception of the beautiful.

On the removal of the seat of empire by Constantine to Byzantium, Roman metal-work had engrafted on to it the peculiarities of Greek workmanship, and it is from this period we may date the rise of Christian art. In the wars by the Mahomedans upon the Eastern Christians, many of these works came to the use of Western Europe. The early Mahomedan conquerors, limited to the most hardy life by the then existing rules of their faith, sold to the Jews who flocked there vast treasures, which being purchased at a value set upon them by the children of the desert, afforded them at once a profitable speculation, and spread through the Western Church numberless models of Byzantine art.

At Santa Sophia, at Constantinople, rich mosaics and colour, and gold were to be found; vessels in gold perhaps unprecedented in quantity and richness, 6,000 candlesticks, and seven crosses of gold, each 200 lbs. in weight; also twenty-four copies of the Evangelists, with bindings of the same material, each weighing 200 lbs. and set with exquisite enamels, and covered with delicate filligree. These, and such as these, became at once the type for Moors, Persians, Russians, and Italians, while there is reason to believe the Oriental goldsmiths who continue this peculiar kind of workmanship to the present day, originally derived their knowledge from the court of Justinian and the works at Santa Sophia. Again, in Spain, a

* Read at the Architectural Museum, by Mr. F. A. Skidmore, Oct. 29th.

Moorish king of Cordova employed a Byzantine architect to construct his elaborate mosque: indeed, numberless instances might be adduced to show that Byzantine artizans and their productions were used by all those nations whose civilization was sufficiently advanced to enable them to appreciate works of art. Theophilus, who lived in the eleventh or twelfth century, speaking of the toil and weariness with which he had acquired a knowledge of the various processes requisite for the adornment of God's house, distinctly mentions having learned much from Greek teaching, and recommends his followers to study Greek ornamentation in the production of their works. As time rolled on, as in architecture, so in its accessory of metal-work, Byzantine forms and modes of working underwent a gradual change. During the twelfth to fourteenth centuries, much progress was made in works in the precious metals, aiding thus the intimate connection which sprang up between goldsmiths' work and art, and led the way to their indulgence in those aspirations which took the wider field of painting and sculpture. The early Italian painters were mostly one succession of goldsmiths, who, not relinquishing their first avocation entirely, yet devoted themselves to those works of art, commencing with Giovanni de Pisa, and continuing till the decline of art in the seventeenth century. The same also holds true of a name so well known in works of iron, Quentin Matsys, before whose painting in the Museum, and Well at Antwerp, I have lingered many hours, finding it scarcely possible to leave that which has no parallel in England.

Among the many records of the character and worth of the productions of the thirteenth and fourteenth centuries, a few will suffice to show their richness. In the year 1241 we find Henry III. directing sufficient sums of money to support the goldsmiths at work in Westminster Abbey, and an inventory informs us of various figures of gold enriching the throne that monarch was erecting, varying in value from 50*l.* to 300*l.*—about 3,000*l.* of our present value: the shrine was also adorned with gems of great price, among them a sapphire worth 1,000*l.* of present money: the only portion now remaining is a part of the frontal of the altar. On the tomb of William de Vallence, in Westminster, surfaces of great size are decorated with enamel.

During the reign of Edward I. great quantities of Limoges enamelled work was imported into England. The possession of Limousin and Agenois by him, will readily account for this fact. The taste of the reigns of Edward II. and Edward III. appears to have been very considerable in favour of enamelling, as in an inventory of the period mention is made of 200 vessels so enriched. In the cathedral at Aix-la-Chapelle I was much struck with the very beautiful effect produced by the use of champ-levé enamel, worked upon a gold ground, as also the use of translucent enamel, having its various tints increased or diminished by the greater or less degree of relief given in the carving of the surface of the silver or other metal on which it was fused. I found it difficult among offerings presented from so many countries and different ages (each and all anxious to pay honour to the resting-place of Charlemagne), to decide which process might claim the largest amount of careful study. The shrine of the three kings at Cologne also presents a fine example of beaten work combined with filigree, gems, and enamels.

Of chalices, it may be well to remark that the bowls assumed various forms and depths: at an early period they were generally the half of a sphere: during the thirteenth and two following centuries this form became the exception, and the bowls were much deeper, the outlines following in harmony with the general characteristics of the foot and knob. The patens were made to fit the bowls, and were enriched on the outward flange by chasing, enamels, gems, and niello, and the centres by engraving.

A short account of the different kinds of enamel will more fully illustrate the character of the works referred to, and tend to show the care and thought by which these enrichments were produced. Byzantine or Cloisome enamel was made after the following manner:—Small strips of gold were cut to the depth the enamel was intended to be inlaid, and were coiled into forms of flowers, animals, &c.; then soldered into their respective places. A preparation of silex with oxide of lead fused together, and coloured with oxide of gold, silver, iron, &c. according to the tint required, being ground to a powder, the interstices were filled with these colours, and under a strong heat fused: the whole was then ground down, exhibiting the various hues requisite in the subjects, and defined by the fine line of gold. Frequently small portions of stone were let in in addition to the enamel: among others, a choice example, protected by a thick crystal, occurs in Alfred's jewel in the Museum at Oxford.

Champ-levé enamel, which succeeded the previous, was treated differently, and afforded a greater variety of capabilities, from the fact that a subject being traced upon the metal (generally copper), the groundwork was carved out with small tools, leaving more or less of the metal standing according to the development required: the ground was then filled with powdered enamel, which, being fused, was subsequently ground off, polished, and gilt.

Another mode consisted of the surface being engraved or chased, in incised patterns, as before, filled with various opaque enamels, and among these some peculiar colours, which are only just being revived. And where spaces had been previously left, having the outline form of the figure preserved, a subject in low relief was attached on the surface of the metal. *It is here* that a large field is opened to the artistic efforts of the present day, where surfaces require enrichment. Take, for example, the plain groundwork of arcades or panels, in tombs or pulpits. A plate of copper might be incised, filled with rich hues of enamel, and on the face of this, raised groups of figures, illustrating appropriate subjects, attached in bronze or gilt.

In the fourteenth century, a style of enamel of extraordinary beauty attained perfection, and has never yet received that large revival of its use which it justly deserves. It consisted of a surface first prepared by carving groups of figures in low relief: these had enamel of various colours fused over their surfaces, giving greater or less depth of tone according to the undulations of the carving. In this class of enamel, the lines dividing the colours are boldly dispensed with, and the difficult process of fusing the colours without mixing at their edges of contact is accomplished.

I hope to be able to exhibit to the members of the Architectural Museum in a short time specimens of the revival of this class of enamel, as also of enamel on large surfaces of iron.

In the sixteenth century, enamel was used much in the same manner as a painting. A white ground was fused over the face of the metal without any incising, except such as would be sufficient to hold the ground on which, with different enamels, the subjects were painted. Some of these of a large size may be seen in most collections of antiquities, generally of grey tints: sometimes gems and stones are represented by minute lobes of enamel.

In the seventeenth century, painting in miniature became the prevailing method of using enamel.*

* To be continued.

THE NEW PICTURE GALLERY AT DRESDEN.

WHOEVER has not seen the German Florence of late years, will be greatly surprised by the sight of this new building. But architecture has its strange fates. On the spot where once Duke August the Strong, of Saxony, intended to build the finest *residence* in Germany—a *temple of art* has been now erected. The court of the new Museum is formed by the two wings of the Zwinger, and the huge centenarian orange-trees impart, during the fine season, a rich southern aspect to this new building.

The plan and the first commencement of the new Dresden Museum were made by Professor Semper, then continued and completed by Messrs. Hähnel and Krüger, State's architects. The building consists of an oblong square, in the midst of which projects the mighty portal. The long northern front is towards the Elbe, the southern towards the Zwinger, to which it is connected by a large portal in the shape of a triumphal arch. According to this form of the space given, the whole plan was to be shaped. Viewing the *ensemble* of the exterior, a certain systematic, artistic idea is diffused over the whole. The *rustic* columns of the ground-floor might have been more imposing, but they fully accomplish their aim. The general plan also coincides with that of the Zwinger,—those smooth surfaces of walls with a contrasting variety of Corinthian pilasters, the round arch windows with their Ionic columns. The whole has been built of the fine-grained grit of the banks of the Elbe.

That, however, which distinguishes the Dresden Museum from all the buildings of the present time, is the number of plastic works with which the exterior is covered. They have been designed by Messrs. Rietschel and Hähnel, and a whole generation of able artists and artizans has grown up out of them. As the interior was destined for the finest bloom the human mind had ever produced, the exterior had to introduce and preface such high exertions. The middle portion of the building, the three portals, and their boldly-projecting Corinthian columns, have given, as it were, the motive for the arrangement of the bas-reliefs. On the postaments of the columns begins the representation of first culture-life, in its mighty champions, Hercules, Perseus, Jason, and Theseus. In the friezes and medallions we see the four *elements*, those conditions which encircle all human action; then the games of old Greece; the artists of a primordial world, Prometheus and Pygmalion, Orpheus and Amphion. On the upper story we perceive in the arches of the middle window Homer and Hesiod, who, foreshadowing Greek plastic art, have given it its eternal patterns. On the very top, on the columns of the principal story, stand the statues of Pericles and Phidias, by Rietschel, of Lysippus and Alexander, by Hähnel. In a similar way the southern front exhibits the images of Christian heroes, the patriarchs and prophets of the old covenant, and those of the new, apostles and evangelists. The mind of this series of plastic history resounds strongest in the two colossal statues of Raffaelle and Michelangelo, which stand in the niches beside the middle window of the upper story. After a number of similar adornments, the uppermost balustrade is crowned by the statues of Holbein, Giotto, Dante, Goethe, &c. Thus, the exterior of the Dresden Gallery exhibits that principle of employing the arts of the present time for the embellishment of a building intended to contain the art-treasures of the past.

In the interior, on the other hand, the principle of perfect simplicity has been adhered to, by letting all the spaces remain as plain as possible—spaces which receive an otherwise unattainable ornament from their very contents. Through an octagonal entrance-hall, which is large enough for carriages, we arrive on one side at the saloons, which contain the casts of ancient sculpture. Every thing here is simple and plain, and thus the error has been avoided, to shame, as it were, those monochrome works of art by the glare of marble. The other spaces of the ground-floor are occupied by the works of Canaletto and the collection of prints. The principal story contains, above the entrance-hall, a high cupola-shaped space, the walls of which are hung with the fine Raffaellean and Netherland carpets. The interior presents a sight harmonious and dignified, which is heightened by the view of the six large picture saloons, arranged in the line of the longitudinal axis. They are all well proportioned, and have a superior light from above. On the north side adjoins twenty-five smaller cabinets, which have a good lateral light, and the last of which contains the Sixtine "Madonna" of Raffaelle,—an arrangement much to be praised, as this unique art-work demands an isolated situation. The upper story contains sixteen pretty large rooms, which have each a top light. All these spaces are exclusively occupied by pictures, which appear in their full beauty and splendour. The walls are of a plain colour, and the vaults of the ceiling are merely ornamented with some relievo-paintings, grey in grey. The light is everywhere managed admirably; and as the spaces are not

over large, the pictures are near enough to be fully viewed and examined. The former *locale* of the Dresden Gallery was above the Royal stables. This transplantation of art treasures reflects great credit on a country of about 2,000,000 of people. The arrangement of the pictures in the new gallery has almost entirely devolved on Director Carolsfeld, and the new catalogue was made by Professor Hübner.—[*From German Sources.*]

PROVINCIAL NEWS.

Windsor.—The local *Express* states, in reference to the castle improvements, that the clerk of works, Mr. Turnbull, has of late been marking out the ground extending from Thames-street, by the Dean's-mews, and up the Slopes to the North-terrace, indicating, as suggested, that the alterations at the castle are about being continued in that direction. The outer works of the castle, and the new wall from Henry the Eighth's gateway to the hundred steps, were last week inspected by Prince Albert.

Christchurch.—On Tuesday before last a public meeting of the inhabitants of this town was held, to take into consideration the propriety of removing the present market-house to a more eligible site. Admiral Walcott, M.P. says the *Hampshire Advertiser*, offered a donation of 200*l.* towards this object, and to add 100*l.* more provided the site chosen and the building erected be compatible with public convenience.

Hereford.—Water-works are being erected in this city. The pressure will be 25 or 26 feet, and many citizens, says a local correspondent, "Aqua," are anxious to have jets, fountains, &c. in their gardens, lawns, &c.; but they do not know the best way to get them cheap, good, and elegant. He asks if any of our readers could put them in the way of attaining their object.

Bath.—The new corn-market here was formally opened by the mayor on Saturday in week before last.

Birmingham.—It is proposed to erect National Schools in the parish of Aston. A piece of land has been purchased, and a design obtained from Mr. Empson, the architect selected; but the funds are very inadequate, only 500*l.* being provided, while the outlay must necessarily amount to 1,500*l.* as it is intended to provide instruction for 700 children. The committee, therefore, appeal to the inhabitants of the borough generally.

Jersey.—The base and the first stone of the obelisk of the Le Sueur Monument, says the *Jersey Times*, have now been laid; but in the intended second block some serious defects have been discovered, and the further elevation of the monument must consequently be suspended until another block can be cut.

CHURCH-BUILDING NEWS.

Norwich.—The subject of the lighting the cathedral with gas is said to be at present under consideration of the dean and chapter. The plan suggested appears to be like that at Ely Cathedral.

Brill.—The parish church of Piddington was reopened on Saturday before last, by the Bishop of Oxford. The galleries which so long disfigured portions of the edifice have been removed; arches thrown open to view, and the old-fashioned pews replaced by uniform low and open sittings.

Cubley.—The church of this place has been repaired and restored, and was re-opened for divine service on Tuesday before last. The cost of the restoration is about 70*l.*—39*l.* odds of which have been defrayed by a rate. The rector (Rev. R. W. Vevers) has restored the chancel at his own expense, and presented an oak octagonal font, &c.

Stockport.—An order has been received from the Privy Council respecting interments in the cemetery connected with the Hanover Chapel at Heaton Norris. The order provides "that interments be discontinued, except in now existing vaults in which each coffin shall be embedded in powdered charcoal and separately entombed with cement in an air-tight manner." The use f charcoal in an air-tight enclosure seems rather questionable. The chief purpose of charcoal in connection with decomposing bodies is to assist in combining the decomposing matter with the oxygen of the air itself, so as rapidly to consume it as it rises in offensive gaseous forms. If, therefore, both the charcoal and the decomposing matter be enclosed and isolated from the air by means of air-tight cement, this sanitary process cannot be promoted by the charcoal, and there is, perhaps. on the contrary, risk in certain cases of an accumulation of the offensive gases till they burst out the cement which confines them. Leaden coffins, it is well known, when made air-tight, often burst from the accumulation of such gases, and they are, in fact, occasionally tapped to prevent this, allowing the offensive gases to escape continually in place of preventing such escape, as lead coffins may often be designed to do, and as the cement in the present instance must be also intended to do: should the cement cease to be air-tight, however, the charcoal may *then* be of some use in hastening the decomposition of the noxious gases. The arrangement should, nevertheless, be reconsidered, as there seems to be a want of fitness and of proper sequence in it.

Oldham.—The roof of Christ Church, Glodwick, was discovered to be on fire on Sunday before last, as the congregation was leaving church. A wooden cistern in connection with an over-heated flue was the cause. These church flues! Surely a notion must widely prevail that it is essential they should be "in connection" with some form or other of wood or timber, so many instances of this sagacious "connection" ever and anon turn up.

Leeds.—The congregation of Trinity Church, Leeds, have recently erected in that edifice a stained window in memory of a late pastor. The stonework is of the Norman period, and the window contains three double quatrefoils, interlaced with circles. The uppermost represents the cross, crown, and emblems of the Passion; the second, an angel with the Holy Book; the third, the emblems of the two sacraments, namely, the font and the holy vessels. Each of these, as well as the border, is filled in with foliage of conventional forms. At the foot is the dedication.

Kirkleatham.—On Sunday before last, the church at Kirkleatham, according to the *Darlington Times*, was re-opened for public worship. Extensive alterations and improvements have been made in it, principally at the cost of Mrs. Newcomen, of Kirkleatham Hall.

Holy Island.—A number of workmen are at present engaged removing the soil and other excrescences which, in the course of centuries, have been allowed to accumulate upon the masonry of the ancient priory in Holy Island, and which have not only concealed much of the intrinsic beauty, but were hastening the decay and annihilation of these fine relics. The work has been undertaken by the Archæological Society at Newcastle-upon-Tyne.

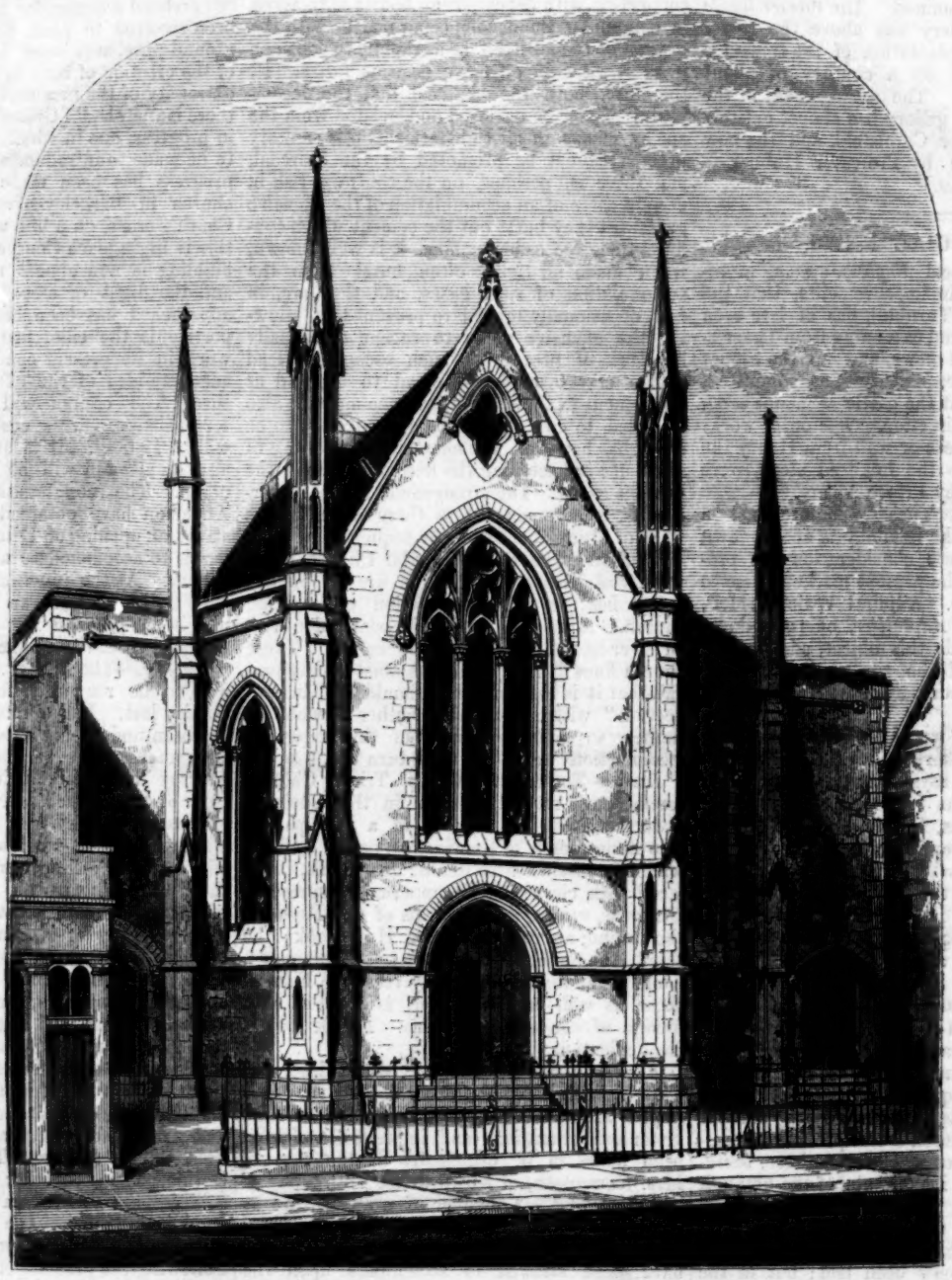
Alnwick.—The old churchyard of this town having been condemned, its place will be supplied by a new cemetery, comprising about six acres of a field, situate about a mile south of the town. The designs for the chapels and the laying out of the grounds, have been provided by Mr. F. R. Wilson, superintendent of the works of restoration at Alnwick Castle, the successful competitor. The buildings will consist of an arched gateway, conducting into a carriage way, forming the boundary between the consecrated and unconsecrated parts of the cemetery. On each side of the gate will be doorways in the centre of pierced walls. The keeper's lodge will be close to one of these. On either side of the carriage drive, will be the chapels, which are designed in the early decorated style of Gothic architecture, with considerable variety in the details. In the plans there is a feature said to have originated with the Bishop of Manchester, as being desirable in all cemetery chapels. This is a small projection at the west end of each building. Into this chamber the corpses will be laid during the time that the burial service is being read in the chapel. The chamber will be separated from the chapel by a screen, and thoroughly ventilated.

Glasgow.—For the new Free Church and College, the promoters have decided upon obtaining plans by competition among a certain number of architects already selected. The plans comprehend a design for a church, which it has been resolved to place beside the college, the ground purchased being large enough to admit of the erection of both buildings. At the south extremity of the new park, in Claremont-street, there is a new U.P. [United Presbyterian?] church in progress, one in which, it is said, an effort is to be made to introduce an organ. Considerable progress has been made with another U. P. church in Berkeley-street, the street behind Charing-cross, on a line with Bath-street. Near this is Elgin-place Congregational Chapel. The building is now almost ready to be roofed in, and the flight of steps by which it will be approached has been laid down; but as the portico is the chief feature of the design, the work in its present condition does not give an adequate idea of the effect of the entire structure. The church will accommodate nearly 1,200 sitters, and the cost, inclusive of the site, will be 12,000*l.* It is said that in this church, also, an attempt will be made to introduce the organ. The congregation of Mr. Jonathan Anderson have obtained a site in Margaret-street, an opening off Eglinton-street. The building is to accommodate about 500, and has no gallery. At the junction of St. Vincent-street with Bothwell-street, an oblong Grecian building is in progress for the Unitarians. Mr. Rochead is said to be the architect.

Paisley.—The Free St. George's Church here was to be reopened for public worship on Sunday last. For a number of weeks past it has been undergoing a thorough internal renovation, under the superintendence of Messrs. D. Murray and Son, painters. The architecture of the church is Norman, and the decorations are in keeping with the style. The window cornices, window mullions, and tracery, ribs of the ceiling, and groined arches of the galleries, are all in polychrome. The effect of the sunk moulding is deepened by coloured lines of red and blue. The sides of the window recesses, the wall around the windows, the intersection of the ribs on the ceiling, and groined arches, are all decorated with coloured ornament. The ornament consists of the various modifications of the zig-zag and tooth ornaments. The corbels and capitals of the columns are gilded, and the sunk portions painted in deep red and green. The columns and staircase balusters are done in imitation of light artistic bronze. The pulpit bench and Gothic screen, together with the front of the galleries, are painted in white enamel, and the mouldings gilded. The panels are green, with its complementary colour, red, in the fieldings. Following the practice of the mediæval artists, the decorator has diapered over the surface of the green panels with small gold crosses. The pulpit and bench, the enrichments of which are not yet finished, are also ornamented with gilding and colour. The seats are painted of a deep dark oak colour. The lining of the area and galleries, with the vomitory doors, are of a deep red, diapered over with a black Gothic ornament, and between the lining and the walls there is run a deep gold moulding. The general effect is said to be somewhat subdued by comparison with the full emblazonment of the style adopted, in consideration of the public taste and as a transition, from the drab and whitewash style in general use throughout Scotland, towards one a little more accordant with and worthy of "the beauty of holiness."

FINE-ART EXHIBITION AT NEWCASTLE.

The time for closing the Fine-Art Exhibition at Newcastle, in connection with the Northern Union of Mechanics' Institutions, has been extended, owing to the continued success of the undertaking. We observe with pleasure the sustained interest of such an exhibition, indicating as it does the settled taste and habits of a large class of the country. Architecture is largely represented by several local architects,—Mr. Dobson, Mr. Oliver, jun. and Messrs. Johnstone and Knowles. Mr. Dobson exhibits his original drawing of the Newcastle Central Station, Jesmond Cemetery, and some interior views of the old Norman Keep. Mr. Oliver has sixteen drawings, including baths and washhouses, cemetery chapels, mechanics' institutes, and several churches. Messrs. Johnstone and Knowles show cemetery chapels, design for a court-house, and the new buildings in St. Nicholas's-square.



FRENCH CONGREGATIONAL CHURCH, HALKETT-PLACE, ST. HELIER.——MESSRS. POULTON AND WOODMAN, ARCHITECTS.

FRENCH INDEPENDENT CHURCH, ST. HELIER.

THE church in Halkett-place, St. Helier, belonging to the French Congregationalists, having become much dilapidated, it has been taken down and replaced by a new building, which was on Friday, the 28th of September, formally opened for public worship. The church having attracted much public attention in the island, and possessing features of considerable novelty, we give views of the building, and subjoin a few particulars.

The Gothic style has been adopted, mainly of the Early Decorated period. The principal front is faced with grey native granite, in random masonry; the windows, doors, copings, turrets, &c. being formed in Caen stone. A central doorway leads to the main lobby, which opens right and left into inner lobbies communicating with the body of the chapel, with the view of preventing cold currents of air from finding access to the building. Two doorways, on the extreme sides of the front, conduct to the raised seats, and will also lead, by means of passages under the raised seats, to the schools contemplated in the rear of the church. The building is 71 feet long by 54 feet wide in the inside, and contains accommodation for 700 persons, and space for making it 1,000, when required.

The cost has been 2,500*l*. Ventilation has been aided by a shaft of considerable altitude. The light is obtained almost exclusively from a large lantern in the roof, from which the light is amply diffused through every portion of the building. Suspended from the roof is a central chandelier, containing seventy-two gas jets. The pulpit is of Caen stone, carved. The whole of the carving has been executed under the architect's directions, by Boulton, of London.

The windows are filled with stained glass, of simple character, by Mr. Lavers, of the Strand. The window in the recess behind the pulpit, has been presented to the church by Mr. Joshua Le Bailly. The communion-railing, organ-pipes, and chandelier, are decorated with white and gold. The internal woodwork is stained and varnished. The architects are Messrs. Poulton and Woodman, of Reading. Mr. Le Rossignol, of St. Helier, is the contractor.

THE GREEK TOMBS AT PAESTUM.—The *Illustrated News* of last week gives us engravings of some of the paintings found in one of these singular tombs, to the discovery of which we have heretofore alluded. No engravings have till now been published, in this country at least, to show the character of the paintings, and it is right we should indicate to our readers where they may be seen: they are curious, illustrating the state of ancient art and customs.

MEDALS TO BRITISH EXHIBITORS IN PARIS.

THE following British Exhibitors in the classes more immediately interesting to our readers have received the prizes or honourable notices attached to their names:—

Large Gold Medal.—Sir E. Landseer, R.A.

First-class Gold Medals.—F. Grant, R.A., Sir J. W. Gordon, R.A., C. R. Leslie, R.A., C. Stanfield, R.A., G. Cattermole, R. Thorburn, R.A., J. H. Robinson.

Second-class Gold Medals.—E. M. Ward, A.R.A., D. Roberts, R.A., W. E. Frith, R.A., T. Webster, R.A., J. E. Millais, A.R.A., F. Taylor, L. Haghe S. Cousins, A.R.A.

Third-class Gold Medals.—R. Ansdell, W. Hunt (water-colours), G. T. Doo, P. F. Poole, A.R.A., John Thompson, F. Y. Hurlstone, D. Macnee, R.S.A.

Honourable Mention.—F. W. Topham, H. Warren, E. H. Wennert, J. Wilson, jun., J. Cross, F. Goodall, A.R.A., E. H. Corbould, E. W. Cooke, F. Danby, A.R.A., A. Elmore, A.R.A., J. D. Harding, J. Holland, J. C. Horsley, A.R.A., R. J. Lane, A.E.R.A., J. Nash, J. N. Paton, J. Phillip, John Pye, L. Stocks, F. Stone, H. T. Wells.

The names of Mr. Mulready, R.A., Sir W. Ross, R.A., D. Maclise, R.A., Creswick, R.A., Redgrave, R.A., Herbert, R.A., Dyce, R.A., Sir Charles Eastlake, R.A., and others among the painters were withdrawn from competition.

INTERIOR OF FRENCH CONGREGATIONAL CHURCH, ST. HELIER, JERSEY.

The following architects have received either medals or honourable mention:—

Sir C. Barry, R.A. (Grande Médaille d'Honneur), C. R. Cockerell, R.A., Owen Jones, T. L. Donaldson, P. Hardwick, R.A., G. Scott, E. Falkener, T. Hamilton, of Edinburgh; Decimus Burton, C. Fowler, Thomas Wyatt, Allom, Digby Wyatt, H. Kendall, H. Shaw.

There have been no medals awarded to British sculptors. Gibson withdrew from competition; Baily likewise.

FIFTH CLASS.—SPECIAL MACHINERY AND MATERIAL FOR RAILROAD AND OTHER MODES OF TRANSPORT.

First-class Medals.—T. Blackwell, London; J. Eastwood, Derby; Peters and Son, London; T. R. Starey, Nottingham; and W. Fairbairn, Manchester.

Second-class Medals.—J. Dunlop, Haddington; P. R. Jackson, Manchester; E. Kesterton, London; W. Lennon, Dublin; Rock and Son, Hastings; J. and G. Shipley, London; and C. Thrupp and Co. London.

Honourable Mention.—Isaac Adelbert, London; W. and G. Ashford, Birmingham; Bengough, London; R. Blythe, London; Davies and Sons, London; B. Ellam, London; H. and A. Holmes, Derby; Hooper and Co., London; J. F. Howard, Bradford; S. Hudson, Dublin; W. Langdon, London; W. Middleman, Birmingham; E. J. Rowland, Manchester; Swayne and Adny, London; W. J. Thorn, London; J. Ward, London.

SIXTH CLASS.—SPECIAL MACHINERY AND MATERIAL OF INDUSTRIAL ARTICLES.

Large Medals.—J. Whitworth and Co. Manchester.

Medal of Honour.—H. Clayton, London.

First-class Medals.—J. Buckton and Co. Leeds; J. Burch, Crag-hall, Chester; Clayton, Shuttleworth, and Co. Lincoln; R. Garrett and Son, Saxmundham, Suffolk; R. Hornsby and Son, Grantham, Lincolnshire; J. R. Johnson, London; Porter, Hinde, and Gorter, Carlisle; Robert Neate, London; W. Rodden, Montreal, Canada; Smith, Peacock, and Janet, Leeds; and J. Whitehead, Preston.

Second class Medals.—G. A. Harvey, Glasgow; G. Hurwood, Ipswich; Huxham and Brown, Exeter; J. R. Johnson, London; F. Lewis and Son, Manchester; A. Lyon, London; D. Munro, Montreal; W. Muir and Co. Manchester; B. P. Paige, Montreal; and Shepherd, Hill, and Spinck, Leeds.

Honourable Mention.—Barrett, Exall, and Andrews, Reading, Berks; B. Corcoran and Co. London; Count and Son, London; MM. Dion and Lepage Rimouki, Canada; P. Dunn, Montreal; C. Kingsford, Cardiff; and W. H. Rice, Montreal.

EIGHTH CLASS.—ARTS CONNECTED WITH SCIENCE AND EDUCATION.

Medals of Honour.—C. Frodsham, London; and Ordnance Map Office.

First-class Medals.—Colonel James; T. Cooke, York; E. T. Loseby, London; Nicole and Capt, London; L. Obertling, London; and Smith and Beck, London.

Second-class Medals.—P. Adie, London; Aubert and Klaftenberger, London; T. D. King, Bristol; and M. Pillischer, London.

Honourable Mention.—F. B. Adams, London; P. Adie, London; T. C. Archer; Furnel, Brighton; A. Gerrard, Aberdeen; Negretti and Zambra; J. Pool, London; R. Sheepshanks, London; and Siemins.

NINTH CLASS.—INDUSTRY CONCERNING THE ECONOMICAL PRODUCTION AND EMPLOYMENT OF HEAT, LIGHT, AND ELECTRICITY.

Large Medal of Honour.—Elkington, Mason, and Co. Birmingham.

First-class Medals.—D. Bailey and Co. and Dr. E. Arnott, London; Edwards and Son, London; W. T. Henley, London; Ordnance Map-office.

Second-class Medals.—Aland; J. H. Bonham and

Son, London; Chinie, Simard, Methal, and Co. Quebec; Coal Company, Brookdale; G. E. Dering, Hertford; J. Daley and Son, Northampton; H. L. Hoole, Sheffield; W. Jeakes, London; Kuper and Co. London; R. S. Newall and Co. Gateshead; W. Pierce, London; T. L. S. Prideaux, London.

Honourable Mention.—Cundy; Evans, Son, and Co. London; Feetham and Co. London; James and Co. Southampton; Sheringham; Thomas Walker, Sheffield.

FOURTEENTH CLASS.—CIVIL CONSTRUCTION.

Large Medals of Honour.—Rendel, London; Stephenson, London.

First-class Medals.—I. K. Brunel, C.E. F.R.S. London; Bunning, London; Office of Public Works, Montreal; Clarke Edwin, C.E. London; Fairbairn, C.E. F.R.S. London; M. J. Fowler, London; E. Hodgkinson, F.R.S. London; M'Donald, Aberdeen; M. J. Murray, C.E. London; Ottell and Co. Montreal; W. Thomas, Hull; Siebe, London; Saunders and Mitchell, London; Sir Bruby Cautley; Board of Works, Dublin; J. Brown, St. Catherine, Canada; J. Costello, London; M. Herbert, London; James Jopez, London; C. E. Leather, London; G. Suff, Ipswich; M. B. Redman, C.E. London; Stephen Salter, London; J. White, Portsmouth.

Honourable Mention.—Cheesewring (Granite Company), Liskeard; Slaters' Company, Shipton, Canada; East-India Company; International Mining Company, Hamilton, Canada; Pierre Gauvreau, Quebec; E. P. Gribbon, Dublin; Samuel Holland and Co. London; Mont and Mitchell, New South Wales; General Penitentiary, Jamaica; Saiges and Green, London.

SEVENTEENTH CLASS—SILVERSMITHS' ART, JEWELLERY, BRONZE WORKS.

Medals of Honour.—R. and S. Garrard, London; C. F. Hancock, London; Hunt and Roskell, London.

First-class Medals.—M. Bissan, Jersey; Cartwright, Hirons, and Woodward, Birmingham; J. R. Collis, Birmingham; Colebrooke Iron Company, Colebrooke-dale; J. Dixon and Son, Sheffield; R. and S. Garrard, London; R. Phillips, London; Watherston and Brogden, London.

Second-class Medals.—J. Goggin, Dublin; J. Hagarth, Sydney, Australia; Prime and Son, Birmingham; Schaw and Fischer, Sheffield; Waterhouse and Co. Dublin.

Honourable Mention.—P. J. Brookes, Birmingham; Sanson and Davenport, Sheffield.

OPERATIVES.

First-class Medals.—J. Billoie, London; Jeannest, Birmingham; H. H. Armstead, London; Regley, London; A. Brown, London; T. Clive, London; E. Cotterell, London.

Honourable Mention.—W. Clark, London; W. Dax, London; C. Grant, London; F. Howard, London; G. Elliott, London; William Ryland, London; W. Theodorus, London; William Millewarel, London; T. Will, London.

EIGHTEENTH CLASS.—GLASS AND CERAMIC MANUFACTURES.

Large Medal of Honour.—H. Minton and Co Stoke-upon-Trent.

Collective Medal of the First Class.—Chance, Brothers, and Co. Oldbury; W. T. Copeland, Stoke-upon-Trent; J. Hartley and Co. Sunderland; T. J. and Joseph Mayer, Stoke-upon-Trent; F. Morley and Co. Shelton; Osler and Co. Birmingham; J. Ridgeway and Co. Cauldon-place, Stafford; Wedgwood and Co. Stoke-upon-Trent.

Second-class Medals.—W. Baker and Co. Stoke-upon-Trent; W. C. Copeland, Stoke-upon-Trent; Elsmore, Forster and Co. Stoke-upon-Trent; S. Green, London; J. Hardman, Birmingham; Kerr and Bins, Worcester; Pinder, Bourne, Hope, and Co. Stoke-upon-Trent; F. R. Pratt and Co. Fenton; Rose and Daniel, Colebrooke Dale; Shaw and Son, Burslem; Singer and Green, London; Swinbourne and Co. London; Walker, Podmere, and Co. Stoke-upon-Trent.

Honourable Mention.—Clark and Co. Wolverhampton; Cottam and Hallen, London; Doulton and Co. London; A. Kenrich and Son, Westbromwich; George Smith, London; T. Till and Son, Stoke-upon-Trent.

TWENTY-FOURTH CLASS.—HOUSE FURNITURE AND DECORATION.

Medals of Honour.—H. E. Hoole, Sheffield; Jackson and Graham, London; East-India Company; G. Jackson and Son; Jennens and Bettridge; T. Kurshaw, London; G. E. Magnus, London; C. Moxon, London; and G. Trollope and Son, London.

Second-class Medals.—Arbate and Clero de Clerville, London; Achima Purboo, East India; the Island of Ceylon; J. G. Crace, London; W. Drum, Quebec; Featham and Co. London; Fonseca-Mehandiram, Ceylon; Gates and George, London; J. and H. Hilton, Montreal; Holland and Son, London; Hood, Hobart-town, Australia; Lalla-Persaud, India; J. M. Levien, London; London and Penzance Serpentine Company; Manackee-Newraje, India; Moorageab-Achary, India; Rancham-Chutteryé, East-India Company; Rhampdone-Nuatry, India; Rustenje-Nowgee, India; T. Smith, Halsham; T. Treloar, London; T. W. Wallis, Louth; Wildey and Co. London; Williams, Cooper, and Co. London; J. Woollams, London.

Honourable Mention.—J. Armstrong, London; J. Bevis, Hamilton, Canada; Cottam and Co. London; Dagnell and Tilbury, London; Finlay, Glasgow; W. Fry and Co. Dublin; Gillow and Co. London; Gewind-Hengi, India; J. and H. Hall, Derby; Jackisson-Mockerjee, East-India Company; Kowan, East-India Company; A. M'Donald, Aberdeen; O. M'Garvey, Montreal; W. Pierce, London; Rhagwan Madowpe, India; G. W. Stevens, London; Miss Widder, Toronto, Canada.

First-class Artisans' Medal.—Stevens, Sheffield.

Second-class Medals.—Messrs. Jackson and Graham, London; Prignet, London.

Honourable Mention.—A. Abercrombie, London; W. Boulton, London; J. Congden, London; Jefferies, London; James Leigh, London; Lester, London; Samuel Peel, London; Van den Brandt, London; Wills, London.

TWENTY-SIXTH CLASS.—DRAWING AND MODELLING APPLIED TO INDUSTRY, PRINTING IN TYPES AND COPPERPLATE (TAILLE-DOUCE), AND PHOTOGRAPHY.

Medal of Honour.—Lockett, Manchester.

First-class Medals.—Abaté, London; Stephen Austin, Hertford; G. Baxter, London; Francis Bedford, London; Besley, London; V. Brooks, London; Caslon, London; J. A. P. Claudet, London; Clowes, London; East-India Company; Cripps; W. Day and Son, London; Digby Wyatt; Eeles and Son, London; Fenton, Photographic Society, London; Figgins, London; M. and N. Hanhart, London; Harris, London; Holloway, London; J. Leighton, London; Leighton, Son, and Hodge, London; Llewelynn, Photographic Society, London; M'Queen, London; Maxuelle Lyte, Photographic Society, London; Rivière, London; Robertson, Constantinople; Sherlock, Photographic Society, London; C. H. Thompson, London; Wright, London; H. White, London.

Second-class Medals.—J. Aresti, London; Black, Edinburgh; Bradbury and Evans, London; Clements, London; P. De la Motte, London; D. Diamond; W. Dickes, London; L. Gruner, London; J. K. Harvey, London; David Kilkardy; Kingsley; Lamb; Neale, London; G. Rowney and Co.; Rylander; Miss Sheppart; Smith, London; Toway, London; Towsend; B. B. Turner, London; Waterloo; London; H. R. Williams, Paris; Wilson.

Honourable Mention.—Bishop, London; Bohn, London; Cole, London; J. C. Doan, Montreal; Adolphe Duperey, Jamaica; Hullmandel and Walton, London; Miss Ironside; J. Leighton; J. E. Mayal, London; Miller, Montreal, Canada; T. J. Palmer, Toronto, Canada; J. Posi, London; Reade; Ross and Thomson, Edinburgh; Sir W. Newton; Snelgrave and Thompson, Sydney; De Solsa; T. Underwood, Birmingham; Wallis, Louth; Waugh and Cox, Sydney; West; Wilkes; H. Yates; and Young, Montreal, Canada.

THE LATE M. TAROUILLY, ARCHITECT.

WE regret to have to announce the death, on the 25th of October, at Paris, of Monsieur Paul Marie Le Tarouilly, Chevalier of the Legion of Honour, architect, and author of the admirable work on the "Palaces and Houses of Rome," which, for accuracy and beauty of execution, is, to the modern architecture of Rome, what Stuart and Revett's volumes are to the antiquities of Athens.

An intense ardour in the illustration of his theme, a deep love of his subject, a scrupulous accuracy, and all the beauty of delineation for which the French school is famous, combine to render his work one of standard authority. For the succeeding volume, he had with untiring perseverance, and at considerable cost, collected a mass of the most curious matter, derived from original drawings by the great masters in the art, and he was prepared to illustrate the history of St. Peter's at Rome by authentic materials existing, and hitherto unknown, in the archives of that church, and in the rich collections of the Roman princes.

During the last two years his health had become impaired by his unremitting application; and his brain becoming affected, he was forced to cease entirely from all occupation upon the favourite theme. He was partially recovering his former strength; but it was too late, and his shattered health has sunk in his 61st year, under his devotion to his task, worthy his ambition, but too laborious for his weak frame. The regrets and affection of all who knew him have followed him to the grave.

THE METROPOLITAN COMMISSION OF SEWERS.

ON the 8th instant, Mr. Bazalgette made a lengthened reply to the charges brought against him by Mr. Ward; and after a sitting of seven hours the following resolution, moved by Mr. Offor, and seconded by Mr. Redhead, was passed:—"That this Court, having most carefully considered the allegations and charges brought by Mr. Ward against Mr. Bazalgette, the chief engineer of this Commission, and his reply to those charges, are of opinion that they have been founded on misconception, and that there is no reason to doubt the efficiency and rectitude of the chief engineer, nor of the consulting engineers of the Commission, and that they are entitled to the continued confidence of the Court, without pronouncing any opinion as to the intercepting sewer question."

Sir John Shelley had previously moved, and Dr. Lewis seconded the following as an amendment:—"That this Court, after having heard the statement of Mr. Commissioner Ward and the reply of Mr. Bazalgette, are of opinion that the objections of Mr. Ward, and the reply of Mr. Bazalgette thereto, should be referred to a committee of eminent engineers and distinguished mathematicians, for their consideration and joint report to this Court."

This however, with a second amendment adjourning the question, was negatived.

STAINED GLASS.

St. Wilfrid's Chapel, Preston.—The fresco-painting of "The Crucifixion," executed by Herr Franz Wurm, of Munich, at St. Wilfrid's Chapel, Preston, is just completed. It is placed over the high altar.

Burley Church, Leeds.—The east window of the chancel of this church has been filled in with stained glass, the work of Mr. F. Barnett, of Edinburgh. The window, as described in the *Leeds Intelligencer*, is of geometric decorated character, and consists of eight lights in breadth, divided by a strong mullion in the centre, and forming two fenestellæ: these fenestellæ carry a circle, containing four quatrefoils, the small complement being filled in with a trefoil. Each fenestella is subdivided into two smaller fenestellæ, carrying a circle enclosing three trefoils, whilst the smaller fenestellæ carry a sixfoil circle. The lower lights are trefoiled in the head. The general character of this design may be traced in the vestibule of the Chapter-house, York, and in the ruins of Tintern Abbey. The style adopted is that which prevailed about A.D. 1330. The window is 12 feet in width, by 22 feet in height. Each of the principal lights contains a full-length figure of a saint under a canopy, filled in with diapering, whilst beneath the light is completed with interlacing work, and foliage consisting of stone and maple leaves alternately. Commencing on the north or left side of the window, the figures are placed in the following order, viz.—Moses, St. Peter, St. Matthew, St. Mark, St. Luke, St. John, St. Matthias, Elias. The canopies have alternate white and gold crockets. The large circle in the head of the window encloses four quatrefoils, containing the symbol of the Trinity, the sacred monogram I. H. C. the Alpha and Omega, and the Lamb and Vexillum. The small vesica window in the gable has also been filled in with stained glass. The glass was obtained from Charleroy, in Belgium.

Harewood Parish Church.—An east window of painted glass has been put up in this church. The window, which is a large one, is divided by stone mullions into five compartments, with contracted space in each division. The lower half of the centre compartment embraces the Crucifixion, with the prostrate Magdalen at the foot of the cross; the upper half the Ascension. The lights on each side embrace the attendant figures; in the former, the Virgin, the weeping women, and the Evangelist St. John, while the

centurion and Roman soldiers on horseback complete the scene; and in the latter the Apostles gazing on the Ascension of our Lord: there are here only ten figures, however, in place of eleven. The two side compartments embrace the following six subjects, three on each side;—the Nativity, the Bearing of the Cross, the Appearance to the Two Disciples at Emmaus, the Appearance to Mary Magdalene in the Garden after the Resurrection, the Entombment, and the Baptism, with the motto "*Ecce Agnus Dei.*" Altogether there are forty-six figures. The tracery is filled with geometrical stained glass. There is little or no attempt at aërial perspective, and not much shading, the effect being obtained by strong lines and contrasts of colour, being an adaptation of the mosaics, a style characteristic of the artists, Messrs. O'Connor, of London. The late Mr. L. Brand left by will 300*l.* for this window.

Kendal Parish Church.—An east window of painted glass, given by Mr. Hilton Halhead, of Liverpool, as a memorial of his father, has been put up in this church. This window is also the production of Messrs. O'Connor. The subjects are a large representation of the Crucifixion, occupying the lower half of three central main lights, and in the upper half of the same part of the window a representation on a similar scale of the Ascension. In the Crucifixion, our Lord on the Cross is attended by groups of figures, as the Virgin fainting, supported by the weeping women; also St. John, the Centurion, &c.; and in the Ascension our Lord is received in a cloud, while the Apostles are looking up with expressions of reverence. In the two outer of the main lights of the window are figures of the four Evangelists, and the subject of the tracery is the twelve Apostles. This window makes the twenty-third painted window in the church, and the baptistry window, which is to be renewed from the bequest of the late Mr. Robinson, will make the twenty-fourth.

THE SCULPTURE OF THE GREEKS.

SHEFFIELD NEW SCHOOL OF DESIGN.

The first stone of the New School of Design, Sheffield, was laid on the 24th ult. by the president, Dr. Branson. Messrs. Manning and Mew are the architects, and Mr. Mycock is the contractor. In the course of his address, Dr. Branson said,—standing on this spot I see before me, a motto, carved on a neighbouring building. It is the first aphorism of Hippocrates, the great Father of Medicine: "Art is long, life is short." Now, at first sight, there is no very obvious connexion between an aphorism of Hippocrates and the building we are founding. A moment's thought, however, will show a very intimate alliance between the author of the aphorism and some of the works which will be placed within these walls. Hippocrates, according to the best chronologists, was twenty-eight years of age when Phidias, the great sculptor of the Parthenon, died. Living in Athens at that time, Hippocrates saw in all their freshness, with all the purity of the marble unsullied, with every touch of the chisel uninjured, those marvellous sculptures which will guide the taste of the student in this institution. He not only saw those sculptures, but conversed, doubtless, about their excellence with the learned of the most learned city of the world. It is just possible, therefore, taking the term "art" in its widest sense, that some thought of their excellence, some belief in their enduring fame, may have passed through his mind when he wrote the aphorism before us: at all events, the fact is proved in reference to these very sculptures by a period of between two and three thousand years, that "Art is long, and life is short." Generation after generation has passed away, nation after nation has passed away, and yet these marvellous sculptures still remain as lasting witnesses to the genius of the great sculptor who wrought them. As these sculptures will guide the taste of every student who wishes to attain to excellence in art, it is worth while for a moment to consider the conditions under which they were produced, and to see whether the opportunities which existed in Greece for the study of art bear any resemblance to the opportunities which we possess at the present day. In the first place, Greece possessed a climate of the greatest purity, which allowed the most beautiful works of art to be constantly exposed to the people. Greece, too, possessed marble quarries of abounding excellence. Next, the habits of the people led them to be constantly in the open air. Again, the state afforded every encouragement to the study of art: great generals and great civilians looked to art for their highest honours. In their games also, in the running and wrestling matches, the finest forms of muscular development were constantly to be seen; and last, though not least, the (comparatively speaking) small population which had to be educated in art. How art was taught we do not precisely know. It was probably taught as philosophy was taught: each great artist and each great philosopher had his train of followers, who listened to the great man's words with an avidity which we can scarcely appreciate.

ENGLISH PATENTS RELATING TO BUILDING.

From the lists of specifications of patents recently filed, as reported in the *Mechanics' Magazine* and elsewhere, we quote the following:—

Chance, James Timmins, of Birmingham. Improvements in the manufacture of pipes or tubes of glass, or other vitreous matter. Patent dated February 3, 1855. (No. 255.) This invention consists in forming tubes of glass, or other vitreous matter, by bending sheets or fillets of it over mandrels or otherwise, so that the edges may overlay, or come together, and be welded by pressure.

Imray, John, engineer, of Bridge-road, Lambeth, Surrey. Improvements in measuring instruments. Patent dated February 5, 1855. (No. 270.) The instrument described by the inventor consists of a graduated bar on which an inclined mirror is mounted, so as to slide rectilineally, and another half-silvered mirror is fixed opposite an eye-piece or telescope, so that when the inclinations of the mirrors are properly adjusted the distance of an object from the fixed mirror is ascertained by moving the sliding mirror along the bar a proportional distance from the fixed mirror, as determined by the coincidence of the direct and reflected images of the observed object.

Gibbons, Joseph, of Oxford-street, Middlesex. An improvement in fixing the spindles of door locks to their knobs. Patent dated Feb. 5, 1855. (No. 271.) In carrying out this invention each spindle is formed with a slit or slits at one or both ends, and on one side of the spindle is fixed a plate of steel or elastic metal. The knobs as heretofore have screws which pass into their shanks, and the inner end of each screw on coming against the spring, near the end of the spring plate, bends out that end so as to enlarge the spindle. The passage in the shank of the knob is inclined or enlarged inwards, to admit of the end of the spring plate being bent outwards, so that the knob can be slided on its spindle into position, and be then fixed by expanding the size of the spindle, either by a screw or other suitable means.

Newton, Alfred Vincent, of Chancery-lane, Middlesex, mechanical draughtsman. An improved mode of constructing dry docks. (A communication.) Patent dated February 7, 1855. (No. 295.) This invention consists in making use of the natural clay foundation for the floor of the dock, the sides and back end being formed of piles, the puddling between the inner and outer piling resting upon the clay floor, and forming a continuation of it after the manner in which cofferdams are puddled.

Ransome, Frederick, of Ipswich. An improvement in the manufacture of artificial stone. Patent dated March 23, 1855. (No. 645.) This improvement consists in applying soluble silicate, obtained by first fusing the compound of silex and alkali for cementing sand and other substances, in the manufacture of artificial stone, which is subject to the action of fire to complete it.

Rimell, John, of Covent-garden, Middlesex, esquire. A substitute for the turpentine ordinarily employed in mixing paints and colours. (A communication.) Application dated March 19, 1855. (No. 607.) "I take," says the inventor, "a quantity of potatoes, and by mashing, bruising, or pressing them, obtain therefrom an extract. I then add to the said extract of potatoes common salt, alum, and litharge. Having well mixed or incorporated together these said ingredients, I next add a sufficient quantity of water to the said mixture so produced, to reduce it to the required state for mixing with the paint or colour."

Newton, Alfred Vincent, of Chancery-lane, Middlesex, mechanical draughtsman. Improved machinery for forming moulds for casting. (A communication.) Patent dated March 20, 1855. (No. 630.) In carrying out this invention the sand, being placed in a chamber or piston box, is moved therein by a pattern, and piston plate surrounding the pattern, and the sand is thus caused to protrude from the piston box and enter a half flask, by which means it is, at the parting, more compressed than at the central portion of the half mould, while on the face of the mould it is sufficiently so to insure good castings and preserve an equal thickness of the metal.

Under the head of complete specifications, filed with applications, we find the following:—

Pidding, William, of Putney, Surrey. Improvements in the manufacture of building materials. Application dated July 17, 1855. (No. 1600.) This invention consists—1. In cementing together pieces of coke, pulverized pumicestone, stone, porcelain, stoneware, glass, shells, bones, and sand, and earthy or metallic matters, with a cement formed of pulverized silica dissolved in a strong or highly concentrated alkaline solution rendered caustic with lime, and combined with the above materials by powerful pressure. 2. In luting the joints of pipes with gutta-percha, caoutchouc, or both. 3. In combining coke, peat, wood, pumicestone, &c. with papier-maché pulp, the compound being pressed and dried.

Warner, Arthur, of New Broad-street, London, merchant. Improvements in coating or combining sheet-iron and steel with sheet-lead, zinc, tin, copper, or alloys of such metals. Application dated August 4, 1855. (No. 1770.) This invention consists in coating or combining sheet-iron and sheet steel with steel, lead, zinc, tin, copper, or alloys of such metals, by applying soldering metal between them, and subjecting them to heat whilst pressed together in a flat state, the heat being applied through one or both of the metals.

The following is a provisional specification not proceeded with:—

Dechanet, Jean Baptiste, iron-manufacturer, and Antoine Dominique Sisco, practical engineer, both of Paris, France. Improvements in the process of manufacturing metallic tubes and pipes, and in the machines or apparatus used for that purpose. Application dated March 26, 1855. (No. 657.) This invention consists in winding or rolling tightly round a mandril sheets of either iron, steel, or compounds of both these or any other suitable metals, as many times as is necessary to produce tubes or pipes of the required size and thickness. The layers of these rolled sheets are made to adhere together by soldering.

Provisional protection was granted on 5th ult. to François Charles Lepage, literary man, of Paris, French Empire, for a new composition or new compositions of materials, which may be employed as a substitute for wood, leather, bone, metal, and other hard or plastic substances, and the method of manufacturing the same.

SALT IN WALLS.—ACTION OF WATER ON LEAD.

The subject of *salt in walls, ceilings, &c.* is one to which the attention of chemists and builders should be drawn, much more than it appears to be at present. The fault of your correspondents in general is, they do not give *the particulars* of the nuisance they are troubled with, but simply state the *fact*,—and that somewhat vaguely.

Now, I am quite at a loss to account for the *salt water* in your correspondent's ceiling,—how it got there, and what he means by the term. Is the ceiling an ordinary one, and the phenomenon without apparent reason? or has sea-water or sea-sand been used in its construction? Perhaps an accident has furnished cause for the occurrence. If your correspondent will give me a circumstantial description of the matter, stating whether the salt is a deliquescent one, rendering the plaster damp, or the reverse, very probably I can assist him, otherwise, I may reason and experiment in the dark. The process I formerly recommended for *salt in walls*,* would very probably succeed in this case.

While on this important and imperfectly understood subject, allow me to appeal to such of the readers of the *Builder* as are troubled with an instance of *nitrification* of any kind. A good series of experiments, with analysis of the various salts formed, might throw a good deal of light upon the matter, and even elicit the true causes of this inconvenient phenomenon: at all events, the best methods of prevention and cure would be arrived at.

Will some of your correspondents, then (and I ask this most earnestly in the name of the many builders and house proprietors now exposed to a continuous and almost ruinous expense from the nitrification of their walls,—in the name of progressive science, and of scores of noble buildings prematurely crumbling to decay), will they send me ("care of the Royal College of Chemistry, Oxford-street") specimens of the *salt* (not *less* than half an ounce), or of the stone, brick, plaster, &c. containing it;—if the salt itself cannot be had in quantity, with accompanying remarks upon the nature of the soil built upon, the presence or absence of decomposing organic matter, &c.

The following, also, are deserving of notice, as important points in the investigation:—The situation: is it near the sea or salt springs? Is the concretion of salt affected by temperature? At what season of the year is it most abundant? Do thunder-storms produce any observable effect? &c. &c.

If I am favoured with a sample of the "*pretty white mould*," as some people call it, rest assured, sir, I

* See p. 313, *ante*.

will do my part of the business. Two months will be the extent of time required for my experiments.

With reference to your paragraph upon the action of water on lead, I beg to offer a few remarks.

The oxide, chloride, and nitrate of lead, are decidedly soluble in pure, or tolerably pure water; but if a water contain sulphuric acid or a soluble sulphate, a film of insoluble sulphate of lead forms upon the surface of the leaden receptacle, and protects it from further action; therefore, I would advise all persons whose drinking water is not *very hard*, to protect themselves from the ill effects of lead poisoning by adding about once a month a little *pure* sulphuric acid to their cisterns, half a dram (fluid measure) to twenty-five gallons. Rain water forms and dissolves oxide of lead very fast, and that fallen during a thunder-storm, containing nitric acid, if brought in contact with lead, will leave a trace of that metal dissolved in it as nitrate.

Sea water attacks lead, with the production of chloride, and water highly charged with carbonic acid dissolves a large quantity. All the danger may be removed by the employment of sulphuric acid as above, at a cost of *eightpence* per annum for a fifty-gallon cistern. WENTWORTH L. SCOTT.

THE CRYSTAL PALACE AS AN EDUCATOR.

A FEW words of comment may not be deemed impertinent on the article which appears in your journal under the above heading, of Saturday last. The Crystal Palace depends for its present and future existence on its success as a commercial speculation; and its present object is evidently, in combining information with amusement, to familiarize the public eye with the noblest works of art; and by leading the thousands on whom it depends for support into a love of the grand and beautiful, to induce them to make the Palace their favourite place of resort. This is its primary object; the other—to be of illustrative use to the earnest student—although it fulfils this condition also, must be, and is, of secondary importance, seeing that a few students, however earnest, could not support the institution. Young as it is, it may be considered, even by those who admire a precocious infancy, to have done wonders for both objects, in a display of intellectual wealth and the acquirement of rich and varied means for imparting information; and its only *partial* success can hardly be attributable to the want (or supposed want) of classification, which is the only tangible objection offered in the article referred to.

The treasures of the Crystal Palace may be scattered somewhat promiscuously, presenting, as Nature does, a variety of characters at a glance; and it is of little importance to the earnest student of art that he should walk inevitably out of one art-epoch into that which followed it,—not alone that such an arrangement might be practically inconvenient to the public at large; but the student of past, and even living languages, must learn to read from left to right and right to left; and the stony record of art is not exempt from this inconvenience. Were it classified in the strictest progressive order, which every art-student knows to be an impossible feat, the contents of the Crystal Palace would STILL astonish, and the beholder would at first return from the contemplation bewildered and confused.

Nature is the alphabet of art. The Crystal Palace contains its history; and for the advantage of those who have no previous knowledge of either, a key has been furnished in the valuable handbooks from the pens of able instructors.—W. S.

BOMBAY WATER SUPPLY.

FROM the second report of Mr. H. Conybeare, published amongst the selections of the records of the Bombay Government in course of the present year, it appears that this gentleman has completely surveyed, estimated, and reported on the whole scheme for the supply of Bombay with water from surface collection in the valley of the Goper, on the main land. This valley, about sixteen miles from Bombay, contracts, so as to afford two favourable sites for damming; while, above, it expands into a wide basin, extremely favourable for water-storing purposes. Four gaps in the hills forming the southern margin of the Vehar-basin will require to be closed by dams if the lower site for a dam be adopted. Two estimates have been prepared; the first, for a reservoir with four dams, including the whole of the Vehar-basin, and a portion of the Valley of Marole, and the second for a reservoir with three dams, excluding the lower portion of the basin. The quantity of water required for the supply of Bombay, including the villages and bungalows throughout the island, at twenty gallons per head per day, is 4,000,000,000 gallons, which the Goper valley is more than adequate to collect and store. Some of the arrangements in the second report, Mr. Conybeare informs us, he has since modified; but the main features remain unaltered. The most notable of these is the great size of the chief storage reservoir, namely, 1,300 acres, which, as he believes, is six times as large as the largest hitherto constructed in England. This reservoir will be capable of holding 9,117,514,470 gallons. The cost of the dams and waste weir will be 17,411*l.* The cost of main pipe, 41 inches in diameter, and 25,520 yards long, is estimated at 133,800*l.* (16,725 tons, at 8*l.* per ton), and the laying (at 1*l.* a yard), 25,520*l.* The cost of town distribution, including fifty-four miles of street mains, will be 43,200*l.*; and of village distribution, including 17,400 yards of masonry conduit, 4,973*l.* The total cost (including 11,710*l.* for contingencies) will be 245,916*l.* exclusive of 1,242 acres of land required, and of engineering expenses. The town distribution will be constant and at high service, with a public and gratuitous supply for the poor, within 100 feet of every house in every street.

HARTLEPOOL MARKET COMPETITION.

SIR,—If you can find room for some of the enclosed correspondence in your columns, it will explain what I think is a novel feature in competitions. The Market Commissioners at West Hartlepool offer by advertisement a *premium* of 20*l.* "for the most approved design" for their proposed market. The inducement seems a fair one enough to lead one to write for a copy of the instructions, from which it appears that the advertisement is a *mere* trap. The commissioners are too shrewd to throw away their money on a premium to encourage professional talent, for this miscalled premium is not to be paid to the successful competitor until one month *after receipt and approval of complete working drawings*, which by the instructions he is to furnish. As the proposed cost of the buildings is fixed at about 3,000*l.* the commissioners are in fact endeavouring to obtain their architect's work at less than one-third of the fair and usual professional remuneration (2½ per cent. exclusive of superintendence). As I cannot but consider this proceeding quite unworthy of a public body, I hope you will lend your aid to place it in its true light before your numerous readers.

CHARLES FOWLER, Jun.

*** It is unnecessary to print the correspondence, the above letter fully explaining the position. So long as architects respond to such invitations, the invitations will of course be given.

Notices of Books.

Brief Memoir of the late William Henry Bartlett, author of "Walks about Jerusalem," &c. By W. BEATTIE, M.D. Published by subscription.

IF this volume had been issued under ordinary circumstances, we should still have commended it to our readers, as a most interesting record of an interesting life,—calculated at once to amuse, stimulate, and instruct. But, published as it is, to supply means for the education and support of the family of the late Mr. Bartlett, who worked hard and well all his life for the advantage of the public, without reaping that pecuniary reward which ought to have followed his extraordinary labours, it has much greater claims on the consideration of the public. The biographical notices of Mr. Bartlett at the time of his decease from the pen of Mr. Britton, will have informed our readers of some of his works. Let us add that Mr. Bartlett made five distinct journeys to the East, and four to America; that the works chiefly or entirely illustrated by his pencil are, "The County of Essex," "Switzerland," "Scotland," "The Waldenses," "The Danube, "The Bosphorus," "American Scenery," "Canadian Scenery," "Scenery and Antiquities of Ireland," making, together,—

15 vols. 4to.

Next to these are,—

The Christian in Palestine	1	„	„
The Life and Epistles of St. Paul	2	„	„
Pictorial History of Scotland (in progress).....	2	„	imp. 8vo.
Castles and Abbeys, vol. ii.....	1	„	„

21 volumes.

[These twenty-one volumes do not include his contributions to Mr. Britton's admirable works—"English Cathedrals," and "Picturesque Antiquities of English Cities;"] and then we have,—due solely to the pen and pencil of Mr. Bartlett—

	VOL.	
1. Walks about the City and Environs of Jerusalem	1	1844.
2. Topography of Jerusalem (in folio)...	1	1845.
3. Forty Days in the Desert on the Track of the Israelites.....	1	1848.
4. Scripture Sites and Scenes from actual Survey in Egypt, Arabia, and Palestine, for the use of Schools, illustrated	1	1849.
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8. Pictures from Sicily	1	1852.
9. The Pilgrim Fathers (of New England)	1	1853.
10. Jerusalem Revisited (in the press) ...	1	1854.
[Sketches of the "Seven Churches," 1854, MS.]	—	
Total, octavo	10	vols.
„ quartos.....	21	„
	31	

To the talents of an accomplished artist, and a pleasing and instructive writer, Mr. Bartlett united those higher qualities of mind and heart which endeared him to all who knew him.

While men remain amongst us, we do not give ourselves the trouble to remember their efforts and their good works. And this leads us to quote a passage in Dr. Beattie's Memoir with reference to one who, if he were less modest, would be oftener heard of—namely, Mr. Bonomi. When Mr. Bartlett was in the plain of Cœlo Syria, at the further extremity of which appeared the temples of Baalbec, he was seized with ague and a tendency to brain fever, and was removed to a ruinous upper chamber in a Saracenic castle, adjoining the great temple. His servant being afraid to be alone with him during the night, Mr. Bonomi, who was in Mr. Catherwood's encampment hard by, agreed to come every night and watch with him. "When the bats, rising from the vaults below," says poor Bartlett in one of his letters, "began to flit through the chamber, I used to hear the cheering cry of my friend Bonomi echoing through the winding passage. . . . And never did a sick child thrill more at his mother's voice than I at the hearty 'Well, how are you, old fellow?' which issued from his lips as he burst into the dreary apartment. Then the lamps were lighted, the pistols primed, Antonio planted on his mattress across the entrance, and every thing made snug for the night." It gives us pleasure to make prominent the kind act of a good heart still beating.

Subscriptions for the "Memoir" are still received by Messrs. Rogers, Olding, and Co. of 29, Clement's-lane, London, and we invite our readers to aid in a good deed.

Miscellanea.

SHIP-BUILDING.—A paragraph relative to tubular spars for ships in your journal for October 13th, p. 491, recalls a suggestion I made about two years ago to a nautical friend, which was of course pooh-poohed down with a gentle rebuke for a landsman's presuming to think anything nautical capable of improvement. I proposed to construct lower masts of large ships, and especially steamers, of hollow iron cylindrical tubes, the topmasts either of timber or iron, to slide within them, and being fitted at the heel with a cupped leather, like the ram of a hydraulic press, the topmast could be raised by hydraulic pressure, applied by means of a small force-pump between decks, the mast, when raised, being fidded, and the water allowed to run out. By employing a lever fid, which could be withdrawn without taking off the weight of the upper mast, it might be struck at once, the air contained in the hollow mast regulating its descent to any required speed by means of valves or cocks below.—D. W. R.

FIRE AT A TIMBER-YARD.—A fire, attended with considerable loss of property, took place on 5th inst. in premises belonging to Mr. R. Connell, in Church-street, Bethnal-green. It appears that some persons living in the neighbourhood were discharging fireworks, when a half-spent rocket fell into the veneer store on Mr. Connell's works, and his whole stock of veneers in the building, said to have been of great value, were immediately in a blaze. In a few minutes the roof fell in, and the flames soon extended to the large stage and stock in the open yard. The damage done in all is somewhat serious, but the premises and stock in trade were insured in the Phœnix Fire Office.

Sweeping and Repairing Turnpike and Township-Roads.—Our attention has been drawn by a correspondent, to the exertions of a surveyor of turnpike-roads about Harrogate and Knaresborough (Mr. Lambert Ellison), in the preservation, repair, and cleansing of roads, and also to a report by Mr. Ellison, published in a Harrogate paper, in which he urges the general substitution of broad for narrow wheels, by the imposition of a smaller toll for broad wheels throughout the country (to this point, if we mistake not, attention has already been drawn in our columns, at the suggestion of Mr. Ellison himself;) as also the uniform breaking up of old roads before laying on new metal, and rolling it in, thus preventing the pulverization of much of the new material; and the use of brushes in summer, as well as patent scrapers in winter for the cleansing of roads from dust and mud; these processes, and especially the summer brushing, tending to preserve the road from tear and wear, which proceeds with much greater rapidity when the road is covered with thick dirt, as well as for comfort both to wayfarers and to roadside householders. Mr. Ellison has tested the brushing process on fifty miles of road, and strongly recommends it. By sweeping with brushes, he remarks, all unevenness is easily and surely detected, and all defects exposed to the eye, all loose stones so dangerous and painful to horses' feet are entirely removed, and the dust so disagreeable to travellers is almost entirely got rid of, so as to be no longer a nuisance.

Sailors' Institute, Shadwell.—The foundation-stone of the new Sailors' Institute, Mercer-street, Shadwell, in connection with the British and Foreign Sailors' Society, has been laid. Mr. Searle is the architect.

"Silver from Paving Stones."—Under this title a paragraph is in circulation which announces that a French chemist, M. Plee, gives an account, in the *Siècle*, of a mode of extracting from quartzeous silex a metal so undistinguishable from silver that new tests must be devised, if possible, for the purpose of deciding which is which. The new metal, if new it be, is regarded as the metallic base of silicon, which is a brownish red powder, hitherto itself regarded as the base of silex of which common flint and quartz are composed. It would thus appear, as indeed has been long suspected, that as silex is an oxide of silicon, so silicon is still but an oxide,—a protoxide, doubtless, while silex is a peroxide,—of this new silvery metal, which may be called silicium, as the very analagous metallic base of alumina has been called aluminium, and that of magnesia, magnesium. Silicon, however, has been hitherto regarded as one of the non-metallic elements, such as carbon, boron, and sulphur, and since it would appear to have been proved to be as purely metallic as potassium, sodium, calcium, aluminium, &c. it is natural to expect that even carbon, boron, and perhaps sulphur, too, may yet be stripped of all *earthiness*, and transmuted, as it were, into pure metal. It is rather unlikely, however, that silicium is in all respects identical with silver: it will probably have, at all events, a much lower specific gravity; but it appears to be equally splendid and equally disinclined to oxidize, a circumstance exceedingly remarkable, considering the immense power with which it retains oxygen when once it is oxidized. The mode described in the *Siècle* for its attainment is briefly this:—Quartzeous silex is first converted by union with an alkali into soluble glass, and is then precipitated from the alkali into gelatinous silex, which is redissolved in a cyanuretted lixivium, so as to form a double cyanuret, in solution, wherein articles of copper, zinc, tin, or lead, may be coated with the metal silicium by the ordinary electrotype process.

Country Churchyards.—Dr. Webster, F.S.A. in reference to country churchyards, as a general means for ascertaining the salubrity of particular districts, says, in the churchyard of Ely the ages mentioned were generally much higher than at Cambridge, seventy to seventy-five being frequent; from eighty to eighty-five by no means uncommon, and one female having died at 102 years of age. Norwich likewise stands high; seventy-five to eighty and eighty-five being often observed on gravestones, although numerous individuals much younger were similarly reported. Cromer, on the northern coast of Norfolk, holds a medium place as to longevity; the ages upon churchyard gravestones were sometimes from seventy to seventy-five, but numbers were younger, while few were older. Great Yarmouth appeared to be the most salubrious of all places in the same county:—"In the extensive cemetery of that borough, eighty-five and ninety were common figures observed on the death-memorials it contained, some of the persons buried being even above that advanced age, whilst one female, it was stated, had actually lived for 111 years." Proceeding from Norfolk to Suffolk, the Doctor speaks strongly in favour of the longevity of the good folks of Southwold, on the sea-shore of that county.

New Method of Joining Iron Plates.—A patent has very recently been granted to Mr. Bertram, a practical engineer employed in the dockyard at Woolwich as foreman of the factory. His invention consists of a process of firmly joining together slabs of sheet-iron work, for boilers, building ships, and erecting bridges, &c. without the use of rivets, by fusing the two edges of the plates to be adhered, and striking them simultaneously on both sides. The structure, it is said, is thus rendered materially lighter, and much stronger. Some experiments, according to the *Times*, have been made by order of the Lords of the Admiralty, in presence of the officers of the Dockyard at Woolwich, who are authorised to report thereon. It has been hitherto considered impossible to make an unlimited surface of iron.

Sale of Mr. G. Lane Fox's Estate.—Mr. Watkinson, of York, is understood to be the purchaser of the Grimston estate, near York. The purchase is stated to be above 35,000*l.*

Chemistry of Building Materials.—I have perused with much pleasure the interesting papers read by Dr. George Wilson, at the Architectural Institute of Scotland, "On the Chemistry of Building Materials," as contained in your journal, and should be very glad to see similar useful information given on the other materials connected with and used in architectural works, by some equally competent writer; including, in iron, the quality in wrought and cast, and the brand-marks which denote the best and other descriptions useful for the various purposes which may be required. My present object is, however, to notice a remark which occurs in Dr. Wilson's paper, as given in your number for September, p. 435, viz.; 1. That earth, as well as wood and snow, are especially the appliances of the savage or half-civilized man; 2. Of the subdivisions of earth (as he afterwards states) being sun-dried and kiln-burnt; and by inference I conclude also clamp-burnt bricks. Now, whatever may be thought of it in Scotland, where stone is so abundant, I do not think that in places less favoured with that material, bricks, whether clamp or kiln-burnt (nor indeed sun-dried, in places where alone they are applicable), can be fairly said to apply "especially to half-civilized or savage life;" seeing that they were largely used by the Romans, and by all civilized nations from their time to the present, in situations where stone is scarce and brick-earth plentiful.—A. B. C.

Gas.—The long talked-of Caistor Gas Company has been provisionally registered, and it has just been resolved by the shareholders, that the works shall be erected by Mr. George Bower, of St. Neots, at a cost of 1,137*l.*; and by the contract entered into by him, they are to be fully completed early in January next. ——The Barton Gas Company have concurred with their directors in a resolution that the sum of 1,300*l.* or upwards, shall be raised for the purpose of making such extensions and improvements in the company's plant as are found necessary to meet the increased consumption of gas.——The Cheltenham Gas Company have given notice of their intention to apply to Parliament next session for a new Act, for power, amongst other things, to supply the adjoining parishes of Leckhampton, Prestbury, Charlton Kings, and Swindon, with gas.——A correspondent of the *Birmingham Journal* suggests, for the better prevention of explosions, that in establishments where much gas is used, a Davy lamp should be provided for use, whenever an escape of gas is discovered. In a recent instance an ordinary lantern was used by way of precaution, but, as might have been anticipated, was of no avail, for the gas entered at the top of the lantern, and instantly produced an explosion. Gas, like its correlative fire, is an excellent servant, but a bad master. It only requires, like it, a little management and care. Naked lights, or even, as we see, common lanterns, ought never to be taken to see where the gas escapes: the nose is usually a better guide than the eye in such a case.——At Liverpool, on Wednesday evening before last, Mr. Flintoff delivered a lecture, in the Clayton-hall, to a crowded audience, "On the existing monopoly in gas, as detailed in the report of the Gas Committee of the Town Council of Liverpool, showing, in the presence of the audience, by actual experiment, how the various over-charges have been effected, and how the gas consumers may regulate their meters, to prevent the glaring impositions of the Gas Company." Much interest, and indeed excitement, was displayed by the meeting in regard to this question, which the lecturer declared to be a national one, as regarded false measure for gas, and by no means confined to Liverpool alone. A resolution was passed against a proposal that the corporation should purchase the Gas Company's stock, bonds, and general interest, or make good the large amount of capital said to have been squandered to increase the actual profits limited in per-centage by Act of Parliament, and from which the shareholders had already reaped for nearly thirty years the maximum of 10 per cent.

The Oxford University Museum.—Although the University, as a body, has voted the sum of 30,000*l.* for the erection of a new museum, the contract entered into provides for very little ornament in the interior. It was therefore proposed, that those who desired to give to the museum the most complete efficiency might do so by private contributions, by which the following additions, which would add to the scientific and artistic expression of the edifice, might be obtained:—Firstly, Shafts for the cloister, of different kinds of British rocks, useful and ornamental, selected in illustration of geological epochs; the igneous rocks to be employed in the ground-floor corridor, and the sedimentary rocks in the upper corridor. Of these there are 128, besides 64 piers, and the cost of each is estimated at 5*l.* Secondly, Capitals to the shafts and piers, illustrating the floras of various epochs, climates, and regions. Of these there are about 192, and the cost of each is estimated at about 5*l.* Thirdly, Statues of the great founders and improvers of natural knowledge, under two heads:—1. Ancients,—in the porch or entrance. The following are proposed as representing the investigators of mathematical, mechanical, and astronomical truths:—Euclid, Archimedes, and Hipparchus; and as representing the investigators of organised nature — Aristotle, Hippocrates, and Pliny. 2. Moderns,—to be placed within the quadrangle; and of these, first of all, Bacon, Galileo, Newton, Leibnitz, Oersted, Lavoisier, Linnæus, Cuvier, Harvey, Hunter, and Sydenham. It is estimated that these, executed in Caen stone, will cost about 70*l.* each. Fourthly, Illustrative inscriptions, to be worked by the architect into the mouldings or elsewhere; as, for instance, "Consider the lilies of the field." One hundred inscriptions can be appropriately placed, and the cost of each is estimated at two guineas. The donors are already numerous.

Oxford Architectural Society.—The first meeting of the term was held on Wednesday evening before last, in the society's rooms, in Holywell-street, Oxford. The president, the Rector of Exeter College, took the chair. The secretary read the report of the committee, in which much praise was bestowed upon the new front of Jesus College, and the buildings in course of erection at Exeter College, and it was hoped that the example of the latter building would lead to the general adoption of a better style of architecture for collegiate purposes. The president, after remarking that Mr. Scott and himself had lately discovered in Exeter College some evident remains of the original fourteenth-century building, called on Mr. Hingston, of Exeter College, who read a paper on the Ecclesiology of Cornwall, ancient and modern, in which the reader, having briefly described the remains of Saxon architecture at Tintagel, of Norman, First Pointed, Middle Pointed, in different churches in the county, proceeded to give some account of the old crosses, fonts, holy wells, and baptisteries. He then discussed the present aspect of ecclesiology in Cornwall, gave an amusing account of Chacewater Church, and others of the "compo" class, of the improvement manifested in St. Paul's, Penzance, and of the late restorations and new churches by various architects. The paper was illustrated by some plates of crosses from Mr. Hingston's own work on the subject, and by some drawings lent by Mr. G. E. Street, architect.

The Polytechnic Institution.—Nearly 1,100 persons filled the great theatre of the Polytechnic on the evening of Monday, the 12th inst. when a lecture was given by Mr. Godwin on the Homes of the People. We may be permitted to note, without any personal reference, but as serving to show in a gratifying manner the extent to which this important subject is now taking hold of the public mind, that this vast audience listened for an hour without a movement, beyond expressions of their sympathy.

Bells.—Since my last communication, I have recollected having read—probably in a Life of Dr. Parr—of a bell of *eighty* cwt. at a parish church in Gloucestershire. I presume rung in peal, and, if so, slightly heavier than at Exeter. Of course, heavier tenors than there specified would be found in London. The mention of "eight" in the "inventory of goods" at Tewkesbury shows that that number was known. Profounder disciples of Browne Willis might, perhaps, find further specimens. The following "note and query" may legitimately interest your antiquarian readers:—Goldsmith, in one of his works—"Citizen of the World"—gives a "Tour to Kentish-town," imitating travellers' style—not the worst of his day—and speaks of "the parish church with its *fine bells*" at "Pancras." Where and how could they have existed? Those who recollect the tower—pulled down about ten years ago,—whose little arch was at least ancient, know that it was very small—hardly sufficient for three small bells. It had one large bell about 30 cwt. now transferred, and, I was told, one *small* one before that. Was it a joke of Goldsmith's,—or could any one now ascertain whether, or how, "fine bells" existed at Pancras eighty years ago?—J. D. P.

LECTURE AT HALIFAX.—A lecture was delivered at Halifax last week to the members of the Halifax Church Sunday School Association, by the Rev. W. Laycock, incumbent of Southowram. The subject was "Oriental Habitations." The lecture was illustrated by diagrams.

IMPROVED BORING TOOLS.—Patents have been obtained in America and this country for "improvements in boring-instruments, known as angers, bits, or gimlets," the invention of Mr. Ransom Cook, of the United States. The improvements consist in giving to the lips or cutting edges of boring implements a curved or gouge shape at their extremities, also in the under-cutting or back-sloping of those edges. The superiority claimed for these tools over anything hitherto known consists, first, in the ease with which the hardest woods may be bored with the largest-sized augers at any angle to the fibres, the perfectly cylindrical character of the hole, the tools neither bruising nor tearing the wood in the slightest degree. The formation of a fine-threaded female screw, by means of this instrument, on the interior surface of the boring, adds greatly to the firm hold of a "treenail" or bolt when driven home. Another valuable result is, the absence of any projecting spur, which is liable to be broken off by contact with metal when in use; while the slight exertion required in boring enables the workman to detect at once the presence of a spike or bolt. The question of sharpening may perhaps offer an objection.

SURVEYOR OF BARNSLEY LOCAL BOARD OF HEALTH.—At the fortnightly meeting of this Board, the testimonials of five parties who had been previously selected from a list of forty candidates were read, and Mr. W. Rowell, civil engineer, of Bradford, was unanimously elected. Mr. Rowell has been for some years past an assistant to Mr. Robert Rawlinson, of London.

MIDDLE-CLASS EDUCATION.—Lord Ebrington has had printed a memorandum on Middle-class Education, in reference to his prize of 20*l.* for the sons and relatives of Devonshire farmers, read at the October meeting of the Council of the Bath and West of England Society for the Encouragement of Agriculture, Arts, Manufactures, and Commerce. In this memorandum his lordship explains his object in offering the prize, to be, "not merely to give young farmers an incentive to exertion, but also to endeavour to ascertain—with a view to its amendment, if necessary—the means of education at present practically available for that class in Devonshire." There will be three successive prizes given during three consecutive years; the first to young men from eighteen to twenty-three inclusive, and a future one to younger lads. Lord Ebrington suggests that some plan of county honours and county degrees is very desirable for the promotion of Middle-class Education throughout the country, and it is by way of initiation or example, though not with the view of founding such a scheme, that he offers these prizes. Lord Ebrington's anxiety on the subject is most commendable.

SOCIETY OF ANTIQUARIES, NEWCASTLE-UPON-TYNE.—The monthly meeting of this society for November, was held on 7th instant, in the Castle of Newcastle, when, amongst other matters brought forward, Dr. Charlton reported that the Black Gate promised to be a very fine building, when completely disclosed. The base was already uncovered. It would be better, perhaps, that the society should do nothing more on the subject, until the designs for the new street were sent in. The building should not only be preserved, but restored, and made subservient to some useful public purpose. The same gentleman afterwards read a paper on "Runic inscriptions from Carlisle and Falstone." The latter was noticed in the Society's Transactions forty years since. As reported in the *Gateshead Observer*, Dr. Charlton next referred to the Runic Inscription recently found in Carlisle Cathedral, surrounded by the marks of the working masons. The Carlisle Inscription is pure Scandinavian—one of the few Norse records that have been discovered in the island. It was discovered in the present year, upon an ordinary wall-stone inside of the west wall of the south transept of the cathedral, by Mr. C. H. Purday, clerk of the works now in progress. It had been covered over with plaster and whitewash; and to this, in all probability, it owes its present state of preservation—for the letters are but faintly scratched with a tool. The words appear to be—"TOLF(O)HN(AR) RAITA THEKSI RUNR A THISI STAIN" (the letters between parentheses being doubtful). No proper name, known to Dr. Charlton, answers to the first word, or to any part of it; and perhaps no name is intended; but, in allusion to the masons' marks around the inscription, some waggish workman, using characters not commonly understood, may have inscribed—"Tolf (twelve) ohuar (idlers) cut these marks on these stones." And yet, in that case, the last word should be plural, *stainr*, and not *stain*; but such violations of grammar are not uncommon in Runes.

ST. GEORGE'S, SOUTHWARK.—The church of St. George the Martyr, Southwark, where considerable alterations have been effected, was reopened for public worship on Wednesday, November 7, by the Archbishop of Canterbury. The old-fashioned high pews have been removed, and others of a more modern character substituted, whereby accommodation for 268 additional persons has been obtained. Means of ventilation have been introduced, and the interior of the building has been redecorated and painted. The ceiling is divided into panels of very light blue, with white mouldings and ornaments painted upon it, in relief; and the styles between the panels are covered with a fret pattern of neutral red: a little primitive colour is introduced in the centres of the pateras, &c. The walls of the church are finished light green; the chancel, white and gold, with Sienna marble pilasters; and all the pewing and fixtures painted oak. The work has been done under the superintendence of Mr. Arthur S. Newman, architect. Mr. Willson is the contractor. The ornamental work has been executed by Messrs. Harland and Fisher.

SALE OF EXETER-CHANGE, STRAND.—On the 14th inst. Messrs. Farebrother and Co. the auctioneers, put up to auction, at Garraway's, the freehold estate, the property of the late Marquis of Exeter. The property was divided into two lots. The first comprised Exeter-Change, the arcade leading from Catherine-street to Wellington-street North, which had in it eleven houses, let at an annual rental of 311*l.* with eight other houses, in Catherine-street, Wellington-street, Exeter-street, and the Strand. These, with Exeter-Change, realized a rental of 1,146*l.* per annum. The lessees of these, as also those of the second lot, covenanted to pay land-tax, sewers-rate, and to insure from fire in the full value. That was knocked down for 21,000*l.* The second lot consisted of the premises, Nos. 343 and 344, Strand, and of Nos. 1, 2, and 3, Catherine-street. The annual rental from these was 600*l.* 4s. 10d. This lot was knocked down for 10,500*l.*

FREE LENDING AND REFERENCE LIBRARY FOR ISLINGTON.—In consequence of a requisition by eighty ratepayers of the parish of Islington, a public meeting of the ratepayers will be held at the Parochial School-room, Church-street, Islington this (Friday) evening, the 16th, at seven o'clock, to decide whether (by vote of two-thirds of the meeting in its favour) the valuable Public Libraries Act shall be applied to the parish. As there can be no ballot afterwards, it is earnestly to be hoped that all who desire to set up so commendable a rival to the gin-shop, will not fail to attend and give their vote, which cannot, under any circumstances, entail the levy of a rate exceeding 1d. in the pound, and more probably may only require one of ½d. or even ¼d.,—to a 30*l.* householder not more than 7½d. a year,—or about the price of a single pot of ale; in return for which, many who now find no amusement out of the gin-shop, may, by obtaining free and rational amusement at home, or in the library, with its books and newspapers, might thus be saved from ruin, and from being an additional burden on the heavier rates. In this way, in fact, the establishment of a free library cannot but bring about a great saving to the ratepayers of so extensive a parish as Islington, which, by the way, would thus, it appears, be the first single parish in any town which has taken advantage of the Ewart Libraries Act. This Act has in general been gladly adopted in towns by large majorities of the voting ratepayers, the City of London a—not very brilliant—exception.

SALTAIRE TESTIMONIAL.—Mr. Milnes, of London, is executing a testimonial which the numerous *employés* of Mr. Titus Salt, of Bradford (nearly 4,000 in number), are about to present to him. A broad pedestal forms the base, bearing a representation of the great factory at Saltaire, of which we some time since gave an engraving. On the top are figures of the Alpaca and Angola goat, with the cornucopia. A column springs from between the two animals, which will be surmounted by a bust of Mr. Salt.

TO CLEAN PAINT.—Smear a piece of flannel with common whiting, mixed to the consistency of common paste, in warm water. Rub the surface to be cleaned quite briskly, and wash off with pure cold water. Grease-spots will in this way be almost instantly removed, as well as other filth, and the paint will retain its brilliancy and beauty unimpaired.—*Stockport Advertiser.*

INSTITUTE OF BRITISH ARCHITECTS.—At the next Ordinary General Meeting of the Session, to be held on Monday evening, the 19th of November, the following paper will be read: "An Abridgement of M. Lance's Essay 'On a Diploma in Architecture,'* with Remarks and Suggestions by Mr. John W. Papworth." At the last meeting Mr. C. H. Smith was elected an honorary member.

* *Du Diplome d'Architecte*, par Adolphe Lance. 8vo. Paris, 1855.

BIRMINGHAM AND MIDLAND INSTITUTE.—The first stone of the new buildings will be laid by his Royal Highness Prince Albert, on Thursday, the 22nd of November. The ceremony will take place at one o'clock, when, after an address from the Council of the Institute to Prince Albert shall have been read by the president, Lord Calthorpe, his Royal Highness will reply, and the stone will be laid with the usual formalities. Immediately after the stone is laid, a luncheon will be given in the Town-hall, which the Prince will honour by his presence. The ambassadors of France, Turkey, and Sardinia, and a number of noblemen and gentlemen, distinguished in science, art, and literature, have been invited.

SOMETHING NEW IN RUSSIA.—"Lately, at the fair of Nijegorod," say the Russian journals, "an iron house was to be seen, composed of ante-chamber, bed-room, sitting-room, dining-room, and kitchen. The front was ornamented with columns, and had three windows. The walls, the roofs, the staircases, &c. were all in iron. Its weight was 800 pouds (nearly 26,000 lbs.), and its price 1,600 silver roubles (6,400 fr.) Two men could take it down in one day, and it only required two days to put it up again."

SOCIETY OF ARTS.—The opening meeting of the one hundred and second session of the Society of Arts, is fixed for Wednesday, the 21st inst. On this occasion the Rev. Dr. Booth, F.R.S. Chairman of Council, will deliver an introductory address, and the medals awarded in the last session will be presented. The papers to be read and discussed at the successive meetings, prior to the Christmas recess, are by Mr. P. L. Simonds, "On the Gums and Resins of Cornwall;" Mr. G. N. Hooper, "On the construction of Private Carriages in England, and on the Carriage Department of the Paris Exhibition;" Mr. J. Bailey Denton, "On the Progress and Results of the Under-drainage of Land in Great Britain;" and Mr. J. K. Blackwell, on "The present position of the Iron Industry of Great Britain, with reference to that of other countries."

THE IRON TRADE.—The following is a monthly statement forwarded to us from Glasgow, by Mr. Thomas Edington, of date 6th inst. showing the principal orders for castings, machinery, rails, &c. ascertained by him to be in the iron markets of Great Britain and Ireland:—1. Orders contracted for during the last few months, in the following places:—in Glasgow—railway chairs for Calcutta, 5,000 tons; Canada, 1,000 tons; Nova Scotia, 700 tons; socket pipes for Bombay, 1,000 tons; Liverpool 3,000 tons; and quantities for Sydney, Italy, Canada, Buenos Ayres, Ireland, &c.:—in Newcastle-upon-Tyne district—railway chairs for London, 4,000 tons, and a quantity for the Geelong and Melbourne railway; socket pipes for Sunderland, 500 tons; Rome, 300 tons; and quantities for London:—at Ipswich—large quantities of railway chairs for London, Calcutta, &c.:—in Staffordshire district—railway chairs for Cheshire, 4,000 tons; Liverpool, 1,200 tons; socket pipes for Copenhagen, 10,000 to 11,000 tons; Cheshire, 170 tons, and quantities for Liverpool:—in Ireland—large iron roof for a theatre at Buenos Ayres:—in London—a large cast-iron lighthouse for the West Indies. 2. New orders—300 tons lamp-posts, a steam-boiler, 400 tons sleepers and rails, for London; two steam-engines for Wolverhampton; five miles pipes, steam-engine, &c. for Heanor, Derbyshire; a portable steam-engine for South Wales. 3. Contracts in view—an English gentleman has just contracted to light the town of Constantinople with gas. The City Water Company of Edinburgh have resolved to apply to Parliament for power to bring in a further supply of water from the estate of Colziu m

TENDERS

For rebuilding Feney Hall, Salop, for Mr. Willoughby Hurt Sitwell. Mr. Norton, architect. Quantities supplied by Mr. Yeldham:—

Willcox and Sons, Bristol	£15,164 0 0
George Smith, Pimlico	12,750 0 0
Winsland and Holland, Bloomsbury	12,488 0 0
Myers, Lambeth (accepted)	12,385 0 0

For the Cemetery at Chatteris, Cambridge. Mr. C. Hutchinson Edwards, architect. Quantities not supplied:—

	Entrance-gates, Chapel, and Lodge.	Boundary Wall, per Rod.	Front ditto.	Drainage.
	£.	£. s. d.	£. s. d.	£. s. d.
Mills and Son	1,704	9 10 0	22 15 0	.....
Johnson and Feast	1,553	8 15 0	9 15 0	.....
Pack and Sons	1,520	10 0 0	11 0 0	.....
Oates	1,380	12 0 0	14 0 0	.....
Chinock and Hook	1,240	9 18 6	13 10 6	.....
Geen (accepted)	1,167	10 10 0	11 10 0	.....
Woodwalton	.....	.....	.....	147 0 0
Garrett	.....	.....	.....	140 0 0
Strickson and Padon	.....	.....	.....	118 18 9
Brown (accepted)	.....	.....	.....	99 0 0